

A REVISION OF THE SPECIES OF *SCHIZONYCHA* DEJEAN (COL.: MELOLONTHIDAE) FROM SOUTHERN AFRICA

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TABLE OF CONTENTS

	<i>Page</i>
INTRODUCTION	65
HISTORY OF THE GENUS	66
SELECTION OF THE TYPE SPECIES OF THE GENUS	68
DIAGNOSIS OF THE GENUS	69
SYNONYMY OF <i>Schizonycha</i>	71
TAXONOMIC POSITION AND RELATIONSHIPS OF THE GENUS	71
SPECIES REMOVED FROM <i>Schizonycha</i>	72
SPECIES INCERTAE SEDIS	72
DISTRIBUTION OF THE SPECIES	76
BIOLOGY AND HABITS	79
PREDATORS AND PARASITES	80
NOTES ON THE KEY TO SPECIES	80
ABBREVIATIONS USED IN THE TEXT	81
ACKNOWLEDGMENTS	81
KEY TO SPECIES	82
DESCRIPTIONS OF SPECIES	96
REFERENCES	215
INDEX	217
PLATES	<i>following page 218</i>

INTRODUCTION

Schizonycha is one of the largest genera of MELOLONTHIDAE. Over 300 species have been described, of which all but 8 are African and of these about 120 occur south of a line drawn across the continent, following the border between Angola and South-west Africa in the west and continuing eastward along the course of the Zambesi to the mouth of that river. This area, called "southern Africa" in the present work, appears to form a natural faunistic unit, very few species of *Schizonycha* occurring on both sides of the line. In view of this, because of the number of species involved and because of the relative accessibility of type material, a revision of the species of *Schizonycha* of southern Africa was undertaken as a first step toward an investigation of the genus as a whole.

As far as has proved possible in connection with a limited survey, the generic concept has been examined, its history traced, a type species selected and the interrelationships of *Schizonycha* and neighbouring genera investigated.

Although there is very little information to date about the biology of the species, such details as are known have been collected together. It is to be hoped that this work will make specific identification of material more readily possible and in doing so stimulate field investigations.

Prior to the present study, some 98 species of *Schizonycha* had been described from southern Africa and 9 species from the same area had been placed in the genus *Atys* Reiche. In this paper, *Atys* and *Schizonycha* are treated as a single genus and so it may be said that at the beginning of this revision, 107 species of *Schizonycha* had been described from southern Africa.

In the following pages, 19 new species are described, 5 instances of established names being applied inadvertently to new species are noted and new names proposed for them and 22 cases of synonymy are recorded for the first time. The final analysis is that 117 species of *Schizonycha* are now known to occur in southern Africa.

Despite the willing co-operation of the authorities of various museums and institutions, the identities of a few species remain in doubt for lack of reliably named material or other evidence which would allow of certain determination. These few are listed, together with the available evidence as to their identity, on pages 72 to 76. The total of 117 species recorded above includes these species.

HISTORY OF THE GENUS

The first use of the name *Schizonycha* occurs in the 1833-35 edition of the *Catalogue des Coleoptères de la Collection de M. le Comte Dejean*. On page 161 the name is ascribed to Dejean and followed by a list of species, three of which are known to have been validly described prior to 1833.

The 1837 edition of the Dejean Catalogue contains a repetition of the list of species of *Schizonycha* given in the 1833-35 edition and five additional names, all of which are *nomina nuda*.

The next appearance of the name in the literature is in the *Histoires des Insects* (1845) by Blanchard. On page 215 of volume 1 he described a genus *Schizonycha*, attributing the name to Dejean, but did not include any species. This work is generally considered unavailable as a source of names as it is not consistently binomial in its nomenclature, but it may be taken as evidence in support of the view that Dejean should be credited with the authorship of *Schizonycha*.

Erichson (1847, p. 658) included *Schizonycha* Dejean in a key to the genera of the tribe *Melolonthini*. In a footnote on the previous page he made it clear that he had discovered that Dejean had included the species of *Diplotaxis* Kirby (1837) in his list of *Schizonycha* species.

In 1850, the first volume of the *Catalogue de la Collection Entomologique du Museum d'Histoire Naturelle de Paris* by Blanchard appeared containing (p. 149) a diagnosis of *Schizonycha*, a statement that it included *Amphimallon* Castelnau (1837) and a

list of 14 included species, 8 of them being described as new. The first reference given under the generic name in 1850 was that of Blanchard 1845. A footnote on the same page acknowledged Dejean as the first to use the name *Schizonycha*, but stated that this first use was in a much wider sense than the interpretation by Blanchard in 1845.

In 1855, Burmeister included *Schizonycha* Dejean in his *Handbuch der Entomologie* (p. 265 ff.), restricting the genus so as to include only species having 10-segmented antennae with a 3-segmented club. He added eleven new species to the genus, nine of them from southern Africa, eight of which are included in the present revision, one of them having been transferred to another genus by Brenske in 1895.

Lacordaire (1856, p. 288) assumed that Erichson had validated Dejean's concept of *Schizonycha* and gave a long description of the genus, following Burmeister in restricting the group to species having 10-segmented antennae with a 3-segmented club. He gave a list of species which consisted of all the species placed in the genus by Blanchard (1850) with the exception of those having a 5-segmented antennal club and with the addition of *Schizonycha ova* Coquerel (1851) from Madagascar.

Boheman (1857, pp. 96-104) added eight species to the genus, all of them from southern Africa. He made no observations concerning the scope or nature of the group.

From 1857 onward, many authors have, at various times, added a large number of species to the genus. Only a few of these authors dealt with species from southern Africa and even fewer gave any treatment of the generic concept.

Kolbe (1894) published a key to the group of genera including *Schizonycha*, separated some species from the genus to found new genera and described a new species of *Atys* Reiche (1850) (see pages 69 to 71) from east Africa.

Brenske (1892, p. 37) commented on Erichson's and Lacordaire's treatment of *Schizonycha*. Three years later (1895, p. 223) he reduced the scope of *Schizonycha* envisaged by Burmeister by removing *S. lurida* Burm. (1855, p. 274) and using it to found a new genus *Glyptoglossa*. In 1898 (pp. 347-378) the same author published a further treatment of the genus, pointing out certain synonymies, particularly of extra-African species, establishing three new genera closely related to *Schizonycha*, providing a table separating the species of *Schizonycha* known to him into groups and describing a number of new species, some of them from southern Africa.

Péringuey (1904, pp. 190-252, 1908, pp. 678-681, 699-702) produced the first, and until the publication of the present paper, the last comprehensive revision of the genus as it occurs in southern Africa. Following a lengthy description of the genus, he provided a key for specific identification, described or redescribed all the species known to him and published illustrations of the *male* genitalia of a majority of the species. He added 62 new species to *Schizonycha* and 9 to *Atys* Reiche. Almost all these species are accepted as valid in this paper, their number being increased where it has been found that Péringuey described a new species under the impression that he was redescribing an already known taxon.

Subsequent to 1908, Kolbe (1910) added a few east African species to the genus and Moser (1914-24) described many new species of *Schizonycha*, 5 of them from southern Africa.

Peyerimhoff (1935, pp. 147-150) revised the north African species of *Schizonycha*, following the suggestion made by Brenske (1896, p. 355) that *Atys* as interpreted by Kolbe (1894, p. 568, 577) should be regarded as a part of *Schizonycha*.

Gridelli (1939, pp. 470-521) published a revision of the species of *Schizonycha* from south Abyssinia, describing some new ones, providing a key for specific identification and also regarding Kolbe's conception of *Atys* as coming within the limits of *Schizonycha*.

Arrow (1944) revised the Asiatic representatives of the genus, providing a key for the identification of the species and describing two new ones.

The last worker to publish any revisionary exposition of the genus was Burgeon (1946) who wrote up the species occurring in Belgian Congo. He described some new species, gave a key to the genera surrounding *Schizonycha* and a key for the identification of the species, separating them into groups after the manner of Brenske (1898). Burgeon's conception of *Schizonycha* was broader than that of Péringuey in that he included *Atys* Reiche and *Etischiza* Brenske as subgenera.

SELECTION OF THE TYPE SPECIES OF THE GENUS

Only three of the many species listed by Dejean in 1833 as belonging to his genus *Schizonycha* had at that time been validly described. One of these, *S. globator* (F.) (p. 141), has been included within the confines of the genus from its erection until the present time. The second, *S. henningii* (Fischer), was transferred to another genus (*Lasiopsis* Blanch. (nec Erichson) = *Lachnota* Reitter) by Blanchard in 1850. The third, *S. cylindrica* (Gyll. in Schönherr), was transferred to *Brahmina* Blanch. by Brenske in 1892.

It follows that, in order to preserve the present interpretation of *Schizonycha* Dejean, it would be necessary to select as the type species of the genus the first of the three species referred to above.

In 1944, Arrow suggested that *Melolontha ruficollis* Fabricius, first placed in *Schizonycha* by Blanchard (1850) might be regarded as the type species of the genus. Arrow accepted Blanchard as the author of *Schizonycha* and so regarded *S. ruficollis* (F.) as an originally included species.

As is now known, Dejean (1833) was the first to apply the name *Schizonycha* to a generic concept. He did not include *Melolontha ruficollis* F. as a species of *Schizonycha*. Therefore that species is not available for selection as the type species of *Schizonycha* Dejean. Blanchard (1850), when describing *Schizonycha* referred to his earlier (1845) diagnosis of the genus and, in a footnote, made it plain that he knew of Dejean's use of the name and stated that he proposed to apply it to a more restricted group than that indicated by the earlier author. Like Dejean, he included *Scarabaeus globator* F. in *Schizonycha*.

In view of the evidence now available, Arrow's suggestion that *S. ruficollis* (F.) might be regarded as the type species of *Schizonycha* must be rejected as an invalid selection and I hereby select *Scarabaeus globator* Fabricius (1781) as the type species of *Schizonycha* Dejean (1833).

DIAGNOSIS OF THE GENUS

MELOLONTHINI with the anterior border of the labrum more or less horizontally emarginate ; with the clypeus having a weakly or strongly raised transverse carina shortly in front of frontoclypeal suture (Text-figs. 21-24) ; with the antennae (Text-figs. 1-5) having a 3-segmented club in both sexes, a long scape, a globose second segment and a funicle composed originally of five segments although these may be more or less fused together so that it appears to be composed of from two to five segments ; with the mentum (Text-fig. 6 *m*) at most shallowly concave, usually flat or slightly convex, sometimes with a shallow longitudinal median ridge ; with the labium not strongly raised on each side of a median excavation ; with the pronotum convex and without a broad anteromedian excavation and without a pair of paramedian anterior tubercles ; elytra without striae or ridges, confusedly but usually more or less evenly punctured, usually short enough to leave at least part of the propygidium exposed ; metasternum raised into a blunt longitudinal carina on either side near its junction with the metepisterna, carinae more strongly developed toward anterior angles of metasternum ; abdomen with five ventrites rounded laterally, without pleural ridges ; anterior tibiae with one or two external teeth in addition to the apical tooth (Text-figs. 41 and 42) ; tarsal claws with a basal inferior lobe and either bifid at the apex or with an inferior median tooth (Text-figs. 10-15).

The diagnosis of *Schizonycha* set out above is such as to give the genus a rather wider scope than was attributed to it by Péringuey. It is in effect a definition of the genus as it was interpreted by Burgeon (1946) and so includes *Atys* Reiche (1850, p. 352) (*nec* de Montfort, 1810) and *Etischiza* Brenske (1898, p. 379). *Atys* Reiche was treated as a separate genus by Péringuey (1904, p. 252) and by Andreae (1933), but was reduced to a subgenus of *Schizonycha* by Burgeon (1946, p. 230). In the present paper it is regarded as a pure synonym of *Schizonycha* Dejean.

Reiche erected *Atys* to contain a single species, *A. samenensis* Reiche from Abyssinia, which he stated to have 7-segmented antennae. This was the only character mentioned by him which distinguished his genus from *Schizonycha* and he remarked that he believed it possible that the antennae were in fact 10-segmented, segments 3, 4, 5 and 6 being more or less completely fused.

Lacordaire (1856, p. 289) gave a long description of Reiche's genus, referring to it as a doubtfully separate group from *Schizonycha*. He very properly pointed out that the uncertainty shown by Reiche over the number of segments in the antennae of his species could only be resolved by examination of a large number of specimens and that it might well be that the result would be a rejection of *Atys* as a separate genus.

Quedenfelt (1884, p. 315) described *Atys diluta* from east Africa. He remarked that although he had seen a long series of specimens they were all *males* and also recorded the antennae as possessing nine segments. He stated that, apart from the number of segments in the antennae, *Atys diluta* was indistinguishable from a species of *Schizonycha*.

Kolbe (1894, p. 568) assumed in his key to the genera surrounding *Schizonycha* that *Atys* had 9-segmented antennae and later in the same paper (p. 577) described

A. glabra from east Africa, referring to it as being very similar to *A. diluta* Qued.

Brenske (1896, p. 355) remarked in a footnote that *Atys samenensis* Reiche was reputed to have 7-segmented antennae and suggested that Kolbe's and Quedenfelt's species did not belong to *Atys*, but should be assigned to a subgenus of *Schizonycha*.

Péringuey (1904, p. 252-259) added several more species to *Atys* Reiche and stated that the sole character distinguishing the genus from *Schizonycha* was the 9-segmented antennae of the *males*.

More recently, Andreae (1933) revised the species placed in *Atys* Reiche by Péringuey, adding one from *Schizonycha* (*S. corrosa* Burm., p. 203). Andreae accepted *Atys* as a valid genus, but Burgeon (1946, p. 230), recording Brenske's remarks of 1896, treated *Atys* as a subgenus of *Schizonycha*, isolated within the main genus by its 9-segmented antennae and by its almost glabrous underside. In the same paper, he described *Schizonycha urundiensis* (p. 241) in which he stated the antennae to be variable, having either 9 or 10 segments, but which had pubescence on the underside and an abdominal formation which forced him to assign it to *Schizonycha* s. str. and not to the subgenus *Atys*.

The type specimen of *Atys samenensis* is deposited in the British Museum (Nat. Hist.). It is a *male* and has an antenna broken off at the articulation between segments 2 and 3, the separated part being mounted on a card. It is clear that the specimen has antennae made up of a trilamellate club preceded by a small cupuliform segment, the latter being connected to the globose second segment by a tube made up of the fused segments 3 to 6 as described by Reiche. What Reiche apparently did not see is that there is a distinct transverse suture less than half-way from the proximal end of the tube, presumably the remains of the articulation between segments 3 and 4. Three other examples of this species in the British Museum have this articulation much better defined and so it may be said that the species is really one with 8-segmented antennae but which shows a tendency to have their number reduced to 7.

Examination of a series of *Atys fallax* Pér. (p. 117) consisting of between 40 and 50 specimens of both sexes showed at least two examples with 8-segmented antennae instead of the usual 9 and a single example in which one antenna had 9 segments while the other possessed only 8.

Schizonycha urundiensis Burgeon has already been referred to as having antennae of either 9 or 10 segments. A similar state of affairs exists in the case of *Atys hypocrita* Pér. (p. 170). Here Péringuey was sufficiently confused by it to describe the species twice, once as above and once as a species of *Schizonycha*.

All this seems to indicate that the reduction of the number of antennal segments is not so fundamental a character as was thought. If there had been variation in the number of lamellae in the club the picture would have been quite different, but the degree of articulation of the funicle is a relatively unimportant matter. Doubt is thus also cast on the validity of *Atys*, either as a genus or a subgenus. In support of this doubt, an examination of all the species placed in *Atys*, together with other material, both named and unnamed, from other parts of the continent, shows the group to be heterogeneous, the species being related individually or in small groups to various distinct, but undoubted species of *Schizonycha*.

In view of this and despite the fact that I have not yet examined every species of *Schizonycha*, I have no hesitation in electing to treat *Atys* Reiche as a synonym of *Schizonycha* Dej.

Embrik Strand (1942, p. 391) first noticed the prior use of the name *Atys* by de Montfort (1810 for a genus of Mollusca) and proposed *Atysilla* as a substitute. This name also becomes a synonym of *Schizonycha*.

Arrow (1944a, p. 634) remarked upon the unavailability of *Atys* Reiche as a generic name in coleoptera, noting at the same time that *Genyoschiza* Moser (1917a, p. 84) appeared from its description to be a possible synonym of Reiche's genus. He suggested that *Genyoschiza* should be provisionally adopted as a substitute name.

Whether or not *Genyoschiza* is synonymous with *Atys* Reiche, no change would be necessitated in the nomenclature used in this paper. The genus was erected for a species from east Africa, and it is treated here as a possible synonym of *Atys* and hence of *Schizonycha*.

Also in his 1946 paper, Burgeon reduced *Etischiza* Brenske (1898, p. 379) to a subgenus of *Schizonycha*. Brenske founded his genus on *Schizonycha heudelotii* Blanchard (1850, p. 150), synonymizing it with *Schizonycha incerta* Burm. (1855, p. 273). Both names were used to describe material from Senegal and although both the validity of the subgenus and the correctness of the synonymy are doubtful, the problem must remain until a revision of the west African species of *Schizonycha* is accomplished.

The synonymy of *Schizonycha* as it stands at present may therefore be summarized as follows :

Schizonycha Dejean, 1833.

Atys Reiche, 1850 (*nec* de Montfort, 1810).

Atysilla Strand, 1942, nom. nov. pro *Atys* Reiche.

? *Genyoschiza* Moser, 1917.

subgen. *Etischiza* Brenske, 1898.

TAXONOMIC POSITION AND RELATIONSHIPS

Schizonycha belongs to that group of the Melolonthini in which the tarsal claws are split apically as well as being equipped with an inferior basal lobe, in which the metepisterna are narrow and more or less acuminate toward their apices and in which the head frequently possesses one or more transverse carinae.

The genus is large and rather diverse and it is possible to see some of the trends within it which may be said to lead outward toward the other genera in the group. All these other genera at present form much smaller groups of species than does *Schizonycha*. Whether any one of them may be considered as ancestral to *Schizonycha* or whether they are all derivative is unanswerable from the evidence obtainable from a partial revision of the genus, but as indicated above, some of their inter-relationships may be traced.

For example, such species as *Schizonycha confinis* Pér (p. 113) and to a greater extent *S. frontalis* Moser (p. 111) are closely related to the species of Kolbe's genus *Hecistopsilus* (1894).

A new species is described later in this paper which shows how *Syngeneschiza* Brenske (1898) with its strongly concave mentum and much produced lateral labial areas may have been derived.

Spathoschiza Arrow (1902) is a curious monobasic genus in which the tarsal claws are trifold and possess a basal lobe as well. Apart from this feature and the strongly produced clypeus with its sharp anterior angles, *Spathoschiza* seems to have a very definite affinity with *S. divulsa* Pér. (p. 106) and *S. inops* Pér. (p. 108).

Homoeoschiza Kolbe (1894), synonymized with *Euryschiza* Brenske (1898) by Moser (*Dtsch. ent. Z.*, 1914, p. 275), has no transverse clypeal carina, but in other respects is strongly reminiscent of *S. debilis* Burm. (p. 120).

Lastly, two other genera closely related to *Schizonycha* are *Entyposis* Kolbe (1894) and *Trichoschiza* Moser (1917), a genus erected for an Abyssinian species. The former is very similar to typical *Schizonycha* species, but is at once segregated by the hollowed out pronotum and the two anteromedian pronotal tubercles typical of the males of *Entyposis*. The second genus, as its name implies, is characterized by long, outstanding setae. These more or less cover the whole of the pronotal surface. *S. dissensa* Pér. (p. 128) and *S. crinita* Brenske (p. 127) both show a tendency toward this state of affairs in that they have a transverse row of long, outstanding setae along the posterior margin of the pronotum.

SPECIES FROM SOUTHERN AFRICA ORIGINALLY DESCRIBED AS *SCHIZONYCHA* BUT SUBSEQUENTLY TRANSFERRED TO OTHER GENERA

Apogonia curtula (Pér.)

Schizonycha curtula Péringuey, 1892, p. 2.

Apogonia curtula (Pér.), Péringuey, 1904, p. 291.

Glyptoglossa lurida (Burm.)

Schizonycha lurida Burmeister, 1855, p. 274.

Glyptoglossa lurida (Burm.), Brenske, 1895, p. 223.

Entyposis simplex (Pér.)

Schizonycha simplex Péringuey, 1904, p. 258.

Entyposis simplex (Pér.), Andreae, 1933, p. 107.

SPECIES INCERTAE SEDIS

Among the many species of *Schizonycha* described from southern Africa, a very few are known from their descriptions alone. The original material on which the species was based has either been lost or is no longer identifiable. The species falling into this category are set out below. The original author's description is repeated together with any subsequent author's interpretation as far as can be ascertained and the results of my own attempts to establish the identity of these species are recorded.

S. oblonga Boh.

Schizonycha oblonga Boheman, 1857, p. 102.

Schizonycha oblonga Boh., Péringuey, 1904, p. 233 (erratum).

Original description : " *Oblonga*, convexa, flavotestacea, subnitida ; capite crebre rugoso-punctato et prothorace parum profunde, minus crebre punctato, antice granulato, saturatoribus ; scutello utrinque punctato ; elytris sat crebre, medio-criter, vage, pygidio rarius punctatis ; geniculis leviter infuscatis.—Long. $9\frac{1}{2}$ –12, lat. $5\frac{1}{4}$ – $6\frac{1}{4}$ millim."

Habitat in Caffraria tota.

Schiz. russulae angustior, minus convexa. Caput latitudine brevius, superne fere planum, rufo-testaceum, sub-nitidum, sat profunde rugosopunctatum. Clypeus reflexo-marginatus, apice rotundatus, carina transversa, medio antrorsum nonnihil arcuata, parum altiore, a fronte distinctus. Oculi rotundati, convexi, nigri. Antennae flavo-testaceae. Prothorax latitudine multo brevior, antice leviter rotundato emarginatus, angulis obtusis ; lateribus tenuiter reflexo-marginatis, ultra medium oblique ampliatis, dein rotundatis ; postice utrinque vix sinuatus, angulis obtusis ; superne convexus, rufo-testaceus, nitidus, parum profunde, sat crebre punctatus, antice subtiliter granulatus, intra basin utrinque transversim impressus. Scutellum breviter triangulare, flavo-testaceum, nitidum, untrunque punctatum. Elytra prothorace non latiora et illo duplo et dimidio longiora, antice subtruncata, humeris parum elevatis, obtusis ; lateribus pone medium parum ampliata, apice conjunctim late rotundata, superne convexa, flavo-testacea, sub-nitida, mediocriter, sat crebre, vage punctata. Corpus subtus flavo-testaceum, nitidum. Pectus subtiliter, crebre punctulatum, parce cinereo-pubescent. Abdomen rarius punctulatum, fere glabrum. Pedes rufo-testacei, punctati, geniculis leviter infuscatis ; femoribus antice medio laevigatis ; tibiis anticis extus obtuse tridentatis, tarsorum artulis apice infuscatis. BHN."

Péringuey synonymized *S. affinis* Boh. and *S. oblonga* Boh., basing his opinion upon material from the Boheman collection. As is shown later (p. 206), the Boheman collection contains a mixed series over the name *S. affinis* and Péringuey unfortunately based his interpretation of the species on a specimen which cannot have belonged to the original type series. The specimen that he regarded as a " co-type " of *S. oblonga* must also have belonged to the species known to him as *S. affinis*. These specimens do not agree with the description of *S. affinis* given by Boheman, neither do they agree with his description of *S. oblonga*. In fact Péringuey described a new species under the impression that he was redescribing *S. affinis* Boh.

As far as can be ascertained there is no material over the name *S. oblonga* in the Boheman collection at the present time and it is not possible to interpret the species with any accuracy. All that can be said is that it should be very similar to the true *S. affinis* Boh. (p. 206), but should have the anterior border of the clypeus semi-circular, the pronotum and pygidium less deeply and less closely punctured and it is very probable that the pronotum does not have a longitudinal median impunctate space.

S. comosa Burm.

Schizonycha comosa Burmeister, 1855, p. 270.

Original description: "Oblongo-ovata, castanea, pernitida, dense subtilius punctata; pectore pedibusque pilis longis hirsutis. Long. 5" ♂.

"Von der Weihnachtsbai (Bay of Natal); Hrn. Germar's Sammlung.—Nicht kürzer aber viel schmaler gebaut, nach hinten etwas breiter, gelbroth, sehr glänzend, viel feiner punktirt; das Kopfschild ebenso gestaltet, die Mitte des Randes erhaben, durch einen schwachen Kiel mit der Stirnkante verbunden. Seiten des Vorderrückens etwas erweitert, sehr dicht punktirt, die Kopfecken etwas schärfer, der Rand fein gekerbt. Afterdecke ziemlich dicht grob punktirt; Brust, Schenkel und Innenseite der Schienen mit langen, rothgelben Haaren dicht bekleidet; Füße ziemlich lang Fühlerfächer klein, hellgelb.—"

In a note following the description, Burmeister offered the opinion that the *S. comosa* might in fact be the *male* of *S. corrosa* Burm. He said that if *S. comosa* and *S. corrosa* were in fact the two sexes of a single species, they would be an example of marked sexual dimorphism unknown to him in the genus and so he elected to regard them as separate species. As is now known, marked sexual dimorphism is a feature of some species of *Schizonycha* (e.g. *S. debilis* Burm. (p. 120), *S. ovatula* Brenske (p. 211) and *S. filiola* Moser (p. 200)), but the description of *S. comosa* given by Burmeister does not agree with what is now known to be the *male* of *S. corrosa* Burm. (p. 203).

Péringuey (1904, p. 206) described a new species under the impression that he was redescribing *S. comosa* Burm. This mistake is dealt with on page 148 of the present paper.

Of all the species of *Schizonycha* described from southern Africa, the one which appears to agree most closely with the description of *S. comosa* is *S. gonaqua* Pér. (p. 139). Even this does not agree entirely and so for the present, *S. comosa* Burm. must be left as a species of doubtful identity.

(?) *S. tumida* (Cast.)

Rhizotrogus tumidus Castelnau, 1840, p. 133.

For:— { *Schizonycha tumida* Blanchard (nec. Cast.), 1850, p. 150 }
 { *Schizonycha tumida* Burmeister (nec Cast.), 1855, p. 267 } see p. 126.
 { *Schizonycha tumida* Péringuey (nec. Cast.), 1905, p. 225 }

Length 14.8 mm. Breadth 6.7 mm.

Original description: "Illig.—Long. 6 lig. $\frac{1}{2}$. Larg. 3 lig.—D'un brun-rouge; tête, corselet et élytres couverts de gros points enfoncés irréguliers; poitrine et pattes velues.—Cap de Bonne-Espérance."

Castelnau named the species he described as *Rhizotrogus tumidus* and attributed the name to Illiger. No melolonthid with the specific name *tumidus* had been described by Illiger prior to 1840, but the name had appeared in the 1833 and 1837 editions of the Dejean Catalogue under the genus *Schizonycha* (a genus not recognized

by Castelnau). Also specimens labelled as *Schizonycha tumida* and *Melolontha tumida*, some of them dating back to at least 1840, are to be found in the collections of the Zoologisches Museum, Berlin. Therefore Castelnau was the author of the species, although he was in all probability validating a name which was in current use among entomologists of his day.

Castelnau did not mention the location of material and so it has to be assumed that he based his description upon specimens in his own collection. The lamellicornia of his collection are now in the Oberthür collection in Paris and they include five specimens over the name "*Schizonycha tumida* Castelnau". Of these, four do not agree with the original description of the species, three of them being examples of *S. livida* Klug (p. 153) and one an example of *S. salaama* Brske. (p. 155). The fifth specimen agrees more closely with Castelnau's description, but is not of a south African species. It is a *female* example of a species occurring in east Africa and as yet undetermined. Thus it would seem that, if Castelnau did describe *tumida* from material in his own collection, none of it remains there today.

The description is too vague to define a single species and so it is not possible to identify *tumida* with certainty in the absence of material from the original series. Such evidence as is obtainable from later authors' interpretations of the species is interesting in that it all points toward *tumida* being synonymous with *S. fartula* Pér. (p. 126). Unfortunately this cannot be taken as proof of identity as the agreement might just as well stem from an original error as from an original knowledge of Castelnau's species.

The present position is that *tumida* Cast. is a species of doubtful identity and later interpretations of that species—which may or may not be correct—are all synonymous with *S. fartula* Pér. (p. 126). These later interpretations are dealt with in the present paper under the latter name (see above).

The acceptance of Castelnau's species in *Schizonycha* relies upon the later interpretations of *tumida* and so it is arguable that the true *tumida* Cast. may not be a member of that genus at all. On the other hand it is very much less likely to belong to *Rhizotrogus* Latreille which is almost entirely palaearctic in distribution. Failing further evidence as to its identity, it seems preferable to leave *tumida* as a *species inquirendae*, provisionally assigned to *Schizonycha*.

S. consobrina Klug

Schizonycha consobrina Klug, 1855, p. 658.

Schizonycha consobrina Klug, 1862, p. 257.

Length 14 mm.

Original description: ". . . subcylindrica, confertim punctata, fusco-brunnea, subtus fulvo-pilosa, clypeo emarginato. Länge $6\frac{1}{2}$ Linien. Von Tette."

The 1862 reference to the species noted that it was founded on a single female example and added the following details to the original latin diagnosis: "Etwas grösser wie die vorhergehende Art, auch verhältnissmässig breiter, sonst ihr sehr ähnlich. Dunkelbraun bis auf die etwas heller gefärbten Deckschilde. Überall mit

eingedrückten Punkten bedeckt, in welchen jedoch Härchen oder Schüppchen nicht zu bemerken sind. Das aufgeworfene Kopfschild an der Spitze ausgerandet. Die Stirnleiste wenig erhöht, zu den Seiten fast erloschen. Die Fühlerkeule rothgelb. Die Seiten des Halschildes und der Deckschilde röthlich gewimpert. Die untere Seite nebst den Schenkeln roth behaart. Die Schienen, wie bei den vorigen Arten, dunkler, fast schwarz."

The "previous species" referred to in the above description is *S. livida* Klug (p. 153). Dr. Delkeskamp has very kindly searched the collections of the Zoologisches Museum, Berlin, on my behalf, but has been unable to find the specimen on which Klug erected this species.

When an interpretation of *S. consobrina* is attempted, a difficulty arises which is reminiscent of the case of *S. unicolor* (Herbst) (p. 129). The elytra were described as being very pale compared with the rest of the body and the legs are referred to as almost black. This suggests very strongly that the specimen may not have been fully coloured. The lack of pronotal and elytral setae mentioned in the description may well indicate a species with minute setae, unobserved by Klug. The final picture is so vague that it is not possible to attach the name to any known species of *Schizonycha* and so it must be left as a doubtful species until further information as to its identity may be available.

DISTRIBUTION

The following table illustrates the known distribution of the species treated in this work. In a few cases the region within southern Africa is not known. Here the record is simply "S. Afr." and is marked in the "Other Regions" column. The restricted distribution and patchy occurrence of some species may well be an illusion arising from lack of material, but it is felt that the regional lists may nonetheless be of value where the establishment of new records is concerned.

It is interesting that only 12 out of a total of 117 species occur both north and south of the Zambesi River.

	Cape Prov.	Natal	Orange F. St.	Bechuanaland	S-W. Africa	Swaziland	S. Rhodesia	Port. E. Afr.	Transvaal	Other regions
<i>abenaba</i> sp. n.	..	..	..	..	+	..	..	+	..	—
<i>abrupta</i> sp. n.	..	+	..	..	..	..	..	..	..	—
<i>abscondita</i> sp. n.	..	..	..	..	..	..	..	..	+	—
<i>affinis</i> Boh.	?	+	..	..	..	..	..	..	..	—
<i>algoensis</i> Pér.	..	..	..	..	..	..	..	+	..	—
<i>ambigua</i> Pér.	..	..	..	..	..	..	+	..	+	—
<i>barda</i> Burm.	..	+	+	..	..	..	..	..	..	—
<i>bohemani</i> n.n.	..	+	..	+	..	..	+	..	+	—
<i>boschimana</i> Pér.	..	+	..	..	..	..	..	..	+	—
<i>capensis</i> Burm.	..	?	..	..	+	..	..	..	..	—
<i>carbonaria</i> Boh.	..	+	+	..	..	..	..	..	..	—

		Cape Prov.	Natal	Orange F. St.	Bechuanaland	S-W. Africa	Swaziland	S. Rhodesia	Port. E. Afr.	Transvaal	Other regions
<i>ciliata</i> Burm.	.	+	..	..	..	+	..	..	..	..	—
<i>citima</i> Pér.	.	..	..	+	+	..	..	+	+	+	Nyasaland.
<i>clypealis</i> sp. n.	.	..	..	..	..	+	..	..	..	..	—
<i>comosa</i> Burm.	.	..	+	..	..	..	..	..	..	..	—
<i>compacta</i> sp. n.	.	..	+	..	..	..	..	..	..	..	—
<i>confinis</i> Pér.	.	..	..	..	..	..	..	+	..	..	—
<i>consobrina</i> Klug.	.	..	..	..	..	..	..	..	+	..	—
<i>constrata</i> Pér.	.	..	..	..	..	..	..	..	..	+	—
<i>continens</i> Pér.	.	+	..	..	..	..	..	+	..	+	—
<i>corrosa</i> Burm.	.	+	..	..	..	..	..	..	..	..	" S. Afr."
<i>crinita</i> Brske.	.	+	..	..	..	..	..	..	..	..	—
<i>damarina</i> Pér.	.	..	..	..	..	+	..	..	..	..	—
<i>debilis</i> Burm.	.	+	..	..	..	..	..	..	..	..	" S. Afr."
<i>deceptor</i> sp. n.	.	+	..	+	..	..	..	..	..	..	—
<i>dilucida</i> Brske.	.	..	..	..	..	..	..	+	+	..	Nyasaland. Tanganyika T.
<i>disputabilis</i> Pér.	.	..	..	..	..	+	..	+	..	..	—
<i>dissensa</i> Pér.	.	+	..	..	..	..	..	..	..	..	—
<i>dissimilis</i> Pér.	.	..	..	..	+	..	..	..	..	+	—
<i>divulsa</i> Pér.	.	..	..	..	..	..	..	+	..	+	—
<i>durbana</i> Pér.	.	..	+	..	..	..	..	..	..	..	—
<i>effeta</i> Pér.	.	+	..	..	..	..	..	..	..	+	—
<i>elegans</i> Pér.	.	+	..	..	..	..	..	..	..	+	—
<i>fallax</i> Pér.	.	..	..	..	..	..	..	+	..	..	—
<i>fatula</i> Pér.	.	+	+	..	..	..	..	..	..	..	—
<i>fatidica</i> Pér.	.	+	+	..	..	..	..	..	..	..	—
<i>feirana</i> Pér.	.	..	..	..	..	..	..	..	..	..	N. Rhodesia.
<i>filiola</i> Moser	.	..	+	..	..	..	..	..	..	..	—
<i>fimbriata</i> Brske.	.	+	+	..	..	..	..	..	..	+	" S. Afr."
<i>fraudigera</i> Pér.	.	..	..	..	..	..	+	..	..	+	—
<i>frontalis</i> Moser	.	..	+	..	..	..	..	..	..	..	—
<i>geilenkeuseri</i> Brske.	.	..	..	..	..	+	..	..	..	+	—
<i>globa</i> sp. n.	.	..	+	..	..	..	..	..	..	..	—
<i>globator</i> (F.)	.	+	..	..	..	..	..	..	..	..	" S. Afr."
<i>gonaquia</i> Pér.	.	+	..	..	..	..	..	..	..	..	—
<i>gonaquoides</i> sp. n.	.	+	..	..	..	..	..	..	..	..	—
<i>gracilis</i> Brske.	.	..	..	..	..	..	..	+	..	..	S.E. Belgian Congo, Tanganyika T.
<i>hybrida</i> Pér.	.	..	..	..	..	..	..	..	..	+	—
<i>ignava</i> Pér.	.	..	..	..	..	..	..	..	..	+	—
<i>increta</i> Pér.	.	..	..	..	..	..	..	..	+	..	—
<i>inedita</i> Pér.	.	..	..	..	..	+	..	..	..	..	—
<i>infarsa</i> Pér.	.	..	..	..	..	..	..	..	..	+	—
<i>inops</i> Pér.	.	..	..	..	+	+	..	+	..	..	—
<i>infans</i> Pér.	.	+	+	..	..	..	..	..	..	+	—
<i>infantilis</i> Pér.	.	..	+	..	..	..	..	+	..	+	—

	Cape Prov.	Natal.	Orange F. St.	Bechuanaland	S. W. Africa	Swaziland	S. Rhodesia	Port E. Africa	Traansval	Other regions
<i>saginata</i> Pér.	+	..	..	..	..	..	..	..	..	—
<i>salaama</i> Brske.	..	..	..	..	..	..	..	+	..	Tanganyika T.
<i>salisburyana</i> Pér.	..	..	..	..	..	..	+	+	..	N. Rhodesia.
<i>scabiosa</i> Pér.	+	..	..	..	..	..	..	..	..	—
<i>spectabilis</i> Pér.	..	..	..	..	..	..	+	..	..	—
<i>spuria</i> Pér.	..	..	..	..	..	..	..	..	+	—
<i>squamifera</i> Wallengr.	..	+	..	..	+	..	..	..	+	"S Afr."
<i>squamosetosa</i> Moser	..	..	..	..	..	..	+	..	..	"S. Afr."
<i>straminea</i> Pér.	..	..	..	..	+	..	+	..	+	{ N. Rhodesia, Nyasaland.
<i>transvaalica</i> Pér.	..	..	..	+	+	..	+	..	..	—
<i>tumida</i> (Cast.)	+	..	..	..	..	..	..	..	..	—
<i>unicolor</i> (Herbst.)	+	..	..	..	..	..	..	..	..	—
<i>usambarae</i> Brske.	..	..	..	..	..	..	+	+	+	{ Tanganyika T., Nyasaland, Zanzibar.
<i>valida</i> Boh.	..	+	?+	..	..	..	+	..	..	—
<i>valvata</i> Brske.	..	..	..	..	..	..	..	..	..	"S. Afr."
<i>villosa</i> Brske.	..	+	..	..	..	..	..	..	..	—
<i>vryburgensis</i> sp. n.	+	..	..	..	..	..	..	..	..	—
<i>windhoekensis</i> sp. n.	..	..	..	..	+	..	..	..	..	—
Total species:	49	27	6	11	21	2	29	14	37	

BIOLOGY AND HABITS

Very little has been written concerning the life histories of these insects. Péringuey made few comments, noting only that the species were crepuscular, or perhaps nocturnal and that two of them, *S. fartula* Pér. (p. 126) and *S. tumida* Cast. (p. 74) occurred commonly in the waste material found outside the galleries of *Hodotermes viator*. He also recorded that these species were to be found at the roots of bushes growing in the termite debris and suggested that it was probable that many more than the two species he named had similar habits.

Some information on *Schizonycha* biology is obtainable from the reports on economic entomology. Insofar as these refer to the species dealt with in this paper, the following facts emerge. Adults of *S. profuga* Pér. (p. 167) have been reported as damaging the fruit and leaves of fruit trees in N. Rhodesia. *S. manicana* Pér. (p. 178) has been credited with damaging apple blossom in S. Rhodesia during November.

Two papers by B. L. Mitchell (1946, *Bull. Minist. Agric. (S. Rhod.)* No. 1365 and 1946, *Rhod. agric. J.* 43, No. 6) refer to the species found in Southern Rhodesia where tobacco plantations have been set up. Here it has been found that the

larvae are indigenous in the sand veldt surrounding the tobacco plantations and that the adults fly mainly by night. Mitchell states that full-grown grubs are most numerous during the first three weeks of January and that they pupate at the end of this month. The pupae remain in the soil until some time during the rains (November–April). Then emergence begins, but is stopped during the cold weather from May to July, emergence restarting during August and September. He estimates that a population density of 1,680 larvae per acre is sufficient to cause a loss of 1% of a tobacco crop.

PREDATORS AND PARASITES

As with the life histories, hardly anything has been written about the enemies of *Schizonycha* species. As far as predators are concerned, the only record relating to a species from southern Africa is one in which a specimen of *Bufo regularis* is stated to have eaten 147 specimens of a species of *Schizonycha* in four nights. (Power, J. H., 1931, *S. Afr. J. of Sci.* 28.)

The only available records of parasites of *Schizonycha* in southern Africa are those given by Jepson (1939, *Rev. Agric. Maurice*, 105) who gives *Campsomeris felina* Sauss., *C. aureoloides* Bradley and *C. madonensis* du Buy (*Scoliidae*) as infesting a species of *Schizonycha* in Natal.

NOTES ON THE KEY TO SPECIES

The construction of a reliable key to the *Schizonycha* species of southern Africa proved a most difficult task. To a practised eye the species are fairly readily recognizable, but they seldom fall into groups which can be used in a dichotomous key. For almost every pair of extreme variations of any character, a number of intermediates exists. As a result the key contains more conditional clauses than might seem desirable.

It would have been a comparatively easy exercise to make a key to *males* alone as these do seem to be separable into satisfactory groups, but this would have left the *females* to be determined by association or by direct comparison; an undesirable arrangement, particularly with species showing marked sexual dimorphism. As there are some such species in the fauna of southern Africa, the following key ignores, as far as possible, those characters which are known to be, or which it is thought might prove to be of a secondary sexual nature. This has been done in the hope that, where only one sex of a particular species is known at present, the other will be equally identifiable by means of the key when it is found.

A few species show variation in a character which is normally constant within a species. In cases where such a character has been used in the key, the variable species has been brought out in more than one place in order to avoid losing an otherwise useful means of group separation.

Some of the terms used in the key and in the descriptions accompanying it might be clarified by a word of explanation here.

"Weakly or feebly obtuse" refers to an angle of between 90° and 120° ; "Weakly acute" an angle of 70° to 90° ; "Strongly obtuse" 150° or more; "Strongly acute" 60° or less.

The general surface of the insects varies from entirely smooth and shining to rough and granulated. The intermediate stages are seen as a fine, more or less irregular network of scratches or impressed lines over the surface, the deepening of these lines producing the granulated effect. This type of microsculpture is referred to throughout the present work as **fine shagreening**, sometimes with the qualification that it is "faint", i.e. little more than fine scratches on the surface.

ABBREVIATIONS USED IN THE TEXT

Throughout the work, the following abbreviations are used to indicate the location of material upon which any given record is based.

B.M. (N.H.)	.	.	British Museum (Natural History), London. N.B. This abbreviation is only used when a series from one locality is housed partly in the British Museum (Nat. Hist.) and partly elsewhere. If a record is based on material from the British Museum alone, no locating abbreviation is given.
B.S.S.	.	.	Zoologische Sammlung des Bayerischen Staates, Munich.
Div. Ent.	.	.	Division of Entomology, Pretoria.
D.A.S.R.	.	.	Department of Agriculture, S. Rhodesia.
F.	.	.	G. Frey Museum, Tutzing b. Munich.
N.H.R.M.	.	.	Naturhistoriska Riksmuseum, Stockholm.
S.A.M.	.	.	South African Museum, Capetown.
Univ. Halle	.	.	Martin Luther University at Halle.
Z.M.B.	.	.	Zoologisches Museum, Humboldt-Universität zu Berlin.
Zoologiska Inst. Lund.	.	.	Lunds Universitets Zoologiska Institution, Lund.

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Text figs. 1-9 were kindly executed by Mrs. C. A. O'Brien.

KEY TO SPECIES

- 1 Hind pronotal angles obsolete (Text-fig. 36); head with a transverse carina across vertex, usually well-marked (2)
- Hind pronotal angles sharp or briefly rounded, rectangular or obtuse (Text-figs. 30, 37, 33); base of head with or without a transverse carina (15)
- 2 (1) Black or pitchy; posterior margin of pronotum without a distinct raised hind border in front of scutellum; anterior pronotal border evenly emarginate or very slightly sinuate toward anterior angles. (Labral emargination strongly obtuse; upper ramus of all tarsal claws much longer than lower.) (3)
- Testaceous to castaneous; posterior pronotal margin with a well-marked raised hind border in front of scutellum (except in *S. ignava* Pér. and *S. puerilis* Pér.); anterior pronotal border sinuate toward anterior angles, usually strongly so, anterior border and anterior border of hypomeron usually continuing in a straight line when viewed from side (Text-fig. 36) (4)
- 3 (2) Broader species (13 × 8 mm.); lateral borders of elytra bearing bunches of short, stiff setae from level of hind coxae to apical borders; anterior face of clypeus without a median gap in its row of setiferous punctures; punctures of pronotal disc scabrose *saginata* Pér. (p. 96)
- Narrower species (12.5 × 6 mm.); lateral borders of elytra each with a single row of outstanding setae from bases to apical borders; anterior face of clypeus with a median gap in its row of setiferous punctures; punctures of pronotal disc annulate *durbana* Pér. (p. 97)
- 4 (2) Anterior face of clypeus with a broad median gap in its row of setiferous punctures; labral emargination strongly acute (Text-fig. 16) *inedita* Pér. (p. 98)
- Anterior face of clypeus without, or with a very narrow median gap in its row of setiferous punctures; labral emargination rightangled or obtuse (5)
- 5 (4) Labral emargination almost rightangled (Text-fig. 17) (6)
- Labral emargination strongly obtuse (Text-fig. 19) (9)
- 6 (5) Clypeal carina feebly arcuate; larger species (13–15 mm. long); basal hind tarsal segment as long as second *feirana* Pér. (p. 99)
- Clypeal carina biarcuate (Text-fig. 23); smaller species (*c.* 10–11 mm. long); basal hind tarsal segment shorter than second (7)
- 7 (6) Metasternum, episterna and hind coxae set with long and short, non-squamiform setae; pronotum with faint traces of micro-sculpture between coarse punctures and with distinct micropunctures *transvaalica* Pér. (p. 100)
- Metasternum, episterna and hind coxae with large, squamiform setae as well as fine, non-squamiform hairs; pronotum with fine, but distinct micro-sculpture between coarse punctures, but without micropunctures (8)
- 8 (7) Lateral borders of elytra with stiff, outstanding setae from bases almost to apical borders; scutellum punctate medially as well as laterally; pygidium not abruptly incurved shortly before apex, more or less evenly convex in profile *ambigua* Pér. (p. 101)
- Lateral elytral borders with stiff, outstanding setae from bases to level of hind coxae, setae behind this point minute; pygidium much more strongly curved near apex than elsewhere, not evenly convex in profile (Text-fig. 51) *languens* Pér. (p. 101)
- 9 (5) Anterior pronotal border sinuate laterally, but not or scarcely sloping obliquely backward to anterior angles, anterior border and that of hypomeron not continuing in a straight line when viewed from the side (Text-fig. 35); hind pronotal margin without a raised hind border in front of scutellum (10)
- Anterior pronotal border strongly sinuate laterally, anterior border and that of hypomeron continuing more or less in a straight line when viewed from one side (Text-fig. 36); hind margin of pronotum with a raised posterior border in front of scutellum (11)

- 10 (9) Frontoclypeal suture biarcuate; vertex of head with a well-marked transverse carina; setae on upper surfaces clearly visible; *males* with upper ramus of tarsal claws shorter and finer than lower *ignava* Pér. (p. 102)
- Frontoclypeal suture not biarcuate; vertex with a feebly-marked transverse carina; setae on upper surfaces minute, inconspicuous; both sexes with upper ramus of all tarsal claws much longer than lower *puerilis* Pér. (p. 134)
- 11 (9) Impressed median area of prosternum setiferous (Text-fig. 6P); *males* with upper ramus of anterior tarsal claws shorter and finer than lower (12)
- Impressed median area of prosternum glabrous; *males* with upper ramus of anterior tarsal claws as broad as and longer than lower (13)
- 12 (11) Lateral borders of elytra with outstanding setae confined to between bases and level of hind coxae; metasternal episterna with conspicuous, white, squamiform setae as well as non-squamiform hairs; *females* with pygidium strongly incurved for apical fourth (Text-fig. 51). *languens* Pér. (p. 101)
- Lateral elytral borders with outstanding setae from bases almost to apical borders; metasternal episterna with all setae fine and non-squamiform; *females* with pygidium feebly convex and with an elongate impression on either side near apex, *males* with pygidium similar to that of *female S. languens bohemani* n. n. (p. 103)
- 13 (11) Scutellum punctate medially as well as laterally; pygidium in profile more strongly curved near apex than elsewhere; clypeal carina very feebly raised *infantilis* Pér. (p. 104)
- Scutellum punctate laterally only; pygidium in profile evenly, sometimes shallowly convex; clypeal carina more strongly raised (14)
- 14 (13) Intervals between coarse pronotal punctures set with micropunctures separated by from six to ten diameters; elytra with similar micropunctures between coarse punctation *disputabilis* Pér. (p. 105)
- Intervals between coarse pronotal punctures with fine shagreening, but without or with a very few, scattered micropunctures; elytra without noticeable micropunctures *parilis* Pér. (p. 105)
- 15 (1) Hind pronotal margin with a raised posterior border which is uninterrupted between hind angles; anterior tibiae bidentate externally or with third (basal) tooth very feebly indicated (Text-figs. 41 and 42); metepisterna bearing squamiform setae distinctly larger than those of elytra; *males* with upper ramus of at least the anterior tarsal claws shorter and finer than lower (16)
- Without the above characters in combination (22)
- 16 (15) Prosternum in front of anterior coxae without setae near its junction with hypomera; vertex of head with a fine transverse carina which is without a row of setae immediately behind it; anterior face of clypeus reflexed medially in some examples, but not vertically convex; *males* with length ratio of the two apical spurs of the hind tibiae more than 2 : 1 (Text-fig. 49); mentum without setae in pits along its basal border (17)
- Prosternum with setae in punctures on either side in front of anterior coxae near junction with hypomera; vertex either with a roughly and irregularly raised transverse carina or, if with a clearly defined carina then with a row of setae arising from immediately behind it; mentum with two long setae arising from pits along its basal border (Text-fig. 6M) (19)
- 17 (16) Impressed area of prosternum between paramedian carinae glabrous; pygidial setae much longer on apical third of pygidium than elsewhere (18)
- Impressed median area of prosternum pubescent (Text-fig. 6P); pygidial setae more or less uniform in length *divulsa* Pér. (p. 106)
- 18 (17) Intervals between pronotal punctures smooth; upper ramus of all tarsal claws shorter and finer than lower in both sexes; basal external tooth of anterior tibiae almost completely obliterated, indicated by a slight, obtuse prominence *squamosetosa* Moser (p. 107)

- Intervals between coarse pronotal punctures with fine, but distinct shagreened microsculpture; upper ramus of all tarsal claws shorter and finer than lower in *males*, at least as long as lower in *females*; anterior tibiae with a small, but distinct basal tooth.
- [Because of this last character, *S. inops* Pér. appears in two places in the key to species, despite the fact that its affinities are obviously with *S. divulsa* and *S. squamosetosa*] ***inops*** Pér. (p. 108)
- 19 (16) Pronotum with distinct transverse, subbasal, impunctate areas (Text-fig. 32); smaller species (up to 12.5 × 6.5 mm.) (20)
- Pronotum without transverse, subbasal, impunctate areas; larger species (13 mm. long or more) (21)
- 20 (19) Vertex of head with a clearly marked transverse carina and with a row of white setae arising from immediately behind it; middle of abdomen devoid of squamiform setae; anterior tibiae without a trace of a third external tooth; squamiform setae of underside lanceolate ***increta*** Pér. (p. 109)
- Vertex of head with no more than a vague indication of a transverse carina; middle of abdomen bearing squamae, although more sparsely clothed than sides; anterior tibiae usually with a feebly marked third external tooth; squamiform setae of underside obovate ***gracilis*** Brske. (p. 110)
- 21 (19) Hind angles of pronotum usually more or less rightangled; larger species (c. 15 × 8 mm.); metasternal setae predominantly fine, long, non-squamiform; scutellum less closely punctate mediobasally than elsewhere; clypeal carina strongly raised ***frontalis*** Moser (p. 111)
- Hind angles of pronotum obviously obtuse; smaller species (Ca. 13 × 6.5 mm.); scutellum evenly and closely punctured; clypeal carina very feebly raised ***confinis*** Pér. (p. 113)
- 22 (15) Posterior angles of pronotum approximately rightangled (Text-fig. 30) and head narrowed from broadest point (a little in front of frontoclypeal suture) to vertex; vertex of head always with at least a trace of a transverse carina (23)
- Posterior angles of pronotum obtuse, or if rightangled by an abrupt sinuation of the lateral borders shortly in front of them (Text-fig. 34), then head not narrowed toward vertex which is with or without a transverse carina (32)
- 23 (22) Black to pitchy; anterior tibiae bidentate externally with the two teeth unusually approximated (Text-fig. 41); punctures of upper surfaces bearing broad, squamiform setae, obvious to the unaided eye (24)
- Testaceous to dark castaneous; anterior tibiae tridentate externally or, if bidentate then with the two teeth normally separated (Text-fig. 42); punctures of upper surfaces set with narrow, squamiform setae or with non-squamiform hairs (25)
- 24 (23) Metasternum, episterna, hind coxae and abdominal segments set with long setae, some of which, although not those on the median area of the abdomen, are narrowly squamiform; propygidium without short, broad, squamiform setae in punctures immediately above pygidium ***peringueyi*** Dalla Torre (p. 114)
- Metasternum, episterna, hind coxae and abdominal segments with short, broad, squamiform setae in punctures, medially as well as laterally; propygidium with short, white, squamiform setae in punctures immediately above pygidium ***nigricornis*** Burm. (p. 114)
- 25 (23) Hind pronotal margin with a distinct raised posterior border in front of scutellum (Text-fig. 9) (26)
- Hind pronotal margin without a raised posterior border in front of scutellum (27)
- 26 (25) Anterior face of clypeus convex vertically and with a median gap in its row of setiferous punctures (Text-fig. 6c); labral emargination at least 90°; lateral borders of elytra with outstanding setae from bases to apical borders ***algoensis*** Pér. (p. 115)

- Anterior face of clypeus vertically plane and without a median gap in its row of setiferous punctures; labral emargination acute (Text-fig. 16); lateral borders of elytra with outstanding setae from bases to level of apical border of second abdominal segment *infarsa* Pér. (p. 116)
- 27 (25) Mentum not strongly convex and with two or more stiff setae arising from small pits along its basal border (Text-fig. 6M). [The pits are visible even if the setae have been broken off] (28)
- Mentum strongly convex and without any setiferous pits along its basal border (31)
- 28 (27) Setae on metepisterna, hind coxae and posterolateral parts of metasternum minute, scarcely discernible; head not sharply angled at vertex which is without a transverse carina; *males* with antennae 9-segmented *fallax* (Pér.) (p. 117)
- Setae on metepisterna, hind coxae and posterolateral parts of metasternum either long and fine or short and narrowly squamiform, readily visible in both cases; head at least sharply angled at vertex, vertex usually carinate; *males* with antennae 10-segmented (29)
- 29 (28) Labral emargination rightangled or very slightly acute; *males* with at least the anterior tarsal claws with the upper ramus shorter and much finer than the lower and with the shorter of the two apical spurs of the hind tibiae straight or evenly curved (30)
- Labral emargination strongly acute (*c.* 45°); both sexes with the upper ramus of all tarsal claws longer than the lower and with the shorter of the two apical spurs of the hind tibiae abruptly curved near its apex (Text-fig. 50) *villosa* Brenske (p. 118)
- 30 (29) *Males* with upper ramus of all tarsal claws much shorter and finer than lower and with the length-ratio of the hind tibial apical spurs *c.* 3 : 2. *Female* unknown *lebidis* n. n. (p. 119)
- *Males* with upper ramus of anterior tarsal claws shorter and finer than lower, but upper rami of middle and hind tarsal claws much longer than lower; length-ratio of apical spurs of hind tibiae more than 2 : 1. *Female* with upper ramus of all tarsal claws longer than lower, with reduced wings and with squamiform setae on the metasternum, metepisterna and hind coxae . . . *debilis* Burm. (p. 120)
- 31 (27) The "*rugosa*" group. *S. rugosa* Brenske (p. 122); *S. valvata* Brenske (p. 123); *S. elegans* Pér. (p. 124); *S. fatidica* Pér. (p. 124); *S. indotata* Pér. (p. 122); ? *S. noscitata* Pér. (p. 125).
- 32 (22) Posterior margin of pronotum set with long, upstanding setae similar to those along lateral borders of pronotum, anterior and lateral margins sometimes set with similar setae. (Species of moderate size, usually more than 13 mm. long, but rarely exceeding 16 mm. in length; underside of thorax set with long, fine, frequently yellow setae; upper ramus of all tarsal claws longer than lower ramus; outstanding setae along lateral borders of elytra usually extending from bases to well behind level of hind coxae.) (33)
- Posterior margin of pronotum without long, upstanding setae similar to those along its lateral borders (36)
- 33 (32) Clypeus with a longitudinal median carina arising from upper anterior border (Text-fig. 21); clypeal carina weakly angled medially; raised pygidial border no thicker apically than along lateral margins (34)
- Clypeus without any trace of a longitudinal median carina; transverse clypeal carina evenly arcuate; pygidium with raised borders distinctly thicker apically than laterally (Text-fig. 26) *fartula* Pér. (p. 126)
- 34 (33) Pronotum with long, outstanding setae along anterior margin and posterior half of lateral margins similar to those along posterior margin in front of scutellum; head less transverse (53 : 75), without a transverse carina across vertex and not sharply angled at vertex; prosternum in front of anterior coxae set with setae near its junction with the hypomera and on the impressed median area; *female* *crinita* Brenske (p. 127)

- Pronotum without long, outstanding setae along anterior margin and posterior half of lateral margins; head more transverse (at least 50 : 80), sharply angled at vertex and sometimes with a transverse carina on vertex; prosternum in front of coxae without setae near its junction with hypomera and with impressed median area glabrous or almost so; *male* and *female* (35)
- 35 (34) Lateral and apical borders of elytra fringed with outstanding, testaceous setae from bases almost to apicosutural angles; setiferous face of elytral epipleura vertical along apical borders (Text-fig. 28); pygidium more transverse (5 : 7); anterior border of pronotum forwardly arcuate medially (as in Text-fig. 31) *disensa* Pér. (p. 128)
- Lateral borders of elytra fringed with outstanding setae from bases to at most the level of the fifth abdominal segment, apical borders glabrous or with very small, inconspicuous setae; elytral epipleura inflected along apical borders (Text-fig. 27); pygidium almost quadrate (58 : 60); anterior border of pronotum not forwardly arcuate medially *unicolor* (Herbst.) (p. 129)
- 36 (32) Mentum with two or more long setae arising from small pits along its basal border (Text-fig. 6M). The pits are visible even if the setae have broken off (37)
- Base of mentum smooth, without setiferous pits along its length (102)
- 37 (36) Anterior face of clypeus without a median gap in its row of setiferous punctures; labral emargination right-angled or obtuse; upper ramus of all tarsal claws longer than lower (38)
- Anterior face of clypeus with at least a narrow median gap in its row of setiferous punctures, or if without a gap then labral emargination acute and upper ramus of tarsal claws shorter and finer than lower (54)
- 38 (37) Lateral borders of elytra with stiff, outstanding setae confined to between bases and level of hind coxae. (Occasional specimens may have setae extending as far back as the level of the first abdominal segment); small species, up to 12.5 mm. long as a rule (39)
- Lateral borders of elytra fringed with stiff, outstanding setae from bases to level of third abdominal segment or beyond; size variable (44)
- 39 (38) Lower ramus of tarsal claws distinctly less than half as long as upper and often directed almost at rightangles to upper (Text-fig. 13); elytral intervals with more or less distinct shagreening between coarse punctures; antennae 10-segmented (40)
- Lower ramus of tarsal claws at least half as long as upper and usually closely applied to it; elytra almost or quite smooth between coarse punctures; antennae 9-segmented *hybrida* (Pér.) (p. 132)
- 40 (39) Metasternum, metepisterna and hind coxae set with broad, white, squamiform setae, much larger than those of elytral punctures; pronotal punctures distinctly asperose toward anterior margin *mediastina* Pér. (p. 133)
- Metasternum, metepisterna and hind coxae set with setae which are scarcely squamiform, if at all; pronotal punctures at most slightly asperose along extreme anterior margin (41)
- 41 (40) Setae along lateral pronotal borders scarcely half as long as maximum width of anterior tibiae; colour variable; setae along lower face of hind femora short, not extending over posterior edge of hind femora (Text-fig. 45) (42)
- Setae along lateral pronotal borders almost as long as maximum width of anterior tibiae; colour ferruginous; setae along lower face of hind femora longer, extending well behind posterior edge of femora *insuesa* Pér. (p. 134)
- 42 (41) Clypeal carina raised across median three fifths of head only; colour variable from castaneous to black; head more broadly truncated anteriorly (Text-fig. 20) (43)
- Clypeal carina distinct as a raised ridge or step from one side of the head to the other; colour pale yellowish testaceous; head much less broadly truncated anteriorly *puerilis* Pér. (p. 134)

- 43 (42) Pygidium almost plane vertically; colour usually black . . . *barda* Burm. (p. 135)
 — Pygidium strongly convex vertically; colour castaneous . . . *effeta* Pér. (p. 136)
- 44 (38) Mentum distinctly concave; colour testaceous to castaneous; size small to moderate (11–14 mm. long) (45)
 — Mentum almost or quite flat; colour variable; size variable (48)
- 45 (44) Relatively broader species (c. 13–14 mm. × 7.5 mm.); clypeus usually with a short longitudinal median carina arising from anterior edge and running backward for about one third of the length of the clypeus (Text-fig. 22); setae along lateral borders of pronotum obviously longer than maximum width of anterior tibiae (47)
 — Relatively narrower species (11 mm. × 5 mm.); clypeus without any trace of a longitudinal median carina; setae along lateral borders of pronotum shorter than maximum width of anterior tibiae (46)
- 46 (45) Lateral and apical margins of elytra finely, but strongly shagreened, discs much less strongly sculptured; anterior border of pronotum and that of hypomera meeting at an angle when viewed from one side (as in *S. puerilis*, Text-fig. 35); both sexes with pygidium having an almost evenly convex profile
 — Lateral and apical margins of elytra similarly sculptured to discs of elytra; anterior border of pronotum and that of hypomeron continuing in a more or less straight line when viewed from one side (as in *S. bohemani*, Text-fig. 36); *male* with pygidium much more strongly convex near apex than elsewhere; *female* with pygidium bearing a subapical tubercle *windhoeckensis* sp. n. (p. 137)
- 47 (45) Frons distinctly concave longitudinally; head sharply angled at vertex; impressed median area of prosternum setiferous (as in Text-fig. 6p)
 — *gonaquoides* sp. n. (p. 140)
 — Frons convex; head not sharply angled at vertex; impressed median area of prosternum glabrous or with two or three setae along its anterior border
gonaqua Pér. (p. 139)
- 48 (44) Colour usually black; intervals between coarse elytral punctures finely, but strongly shagreened; surface dull (49)
 — Colour pale testaceous to pale castaneous; intervals between coarse elytral punctures smooth or with faint, sometimes incomplete microsculpture (50)
- 49 (48) Larger species (13–16 mm. long); *female* only; punctures of pronotal disc small, transverse, usually emarginate along their anterior border (Text-fig. 7); elytra without outstanding setae along their apical borders . . . *rotunda* sp. n. (p. 140)
 — Smaller species (10–12 mm. long); pronotal punctures relatively larger, almost circular, not emarginate anteriorly (Text-fig. 8); elytra usually with an apical fringe of short, stiff setae *globator* (F.) (p. 141)
- 50 (48) Basal hind tarsal segment at least as long as second segment; labral emargination obtuse, but obvious (51)
 — Basal hind tarsal segment distinctly shorter than second; labrum scarcely emarginate at all. (Vertex of head not sharply angled and without a transverse carina; pronotum with a very narrow, raised hind border in front of scutellum.) *jordani* sp. n. (p. 143) (Text-fig. 3)
- 51 (50) Smaller species (9–11 mm. long); (Clypeus with a short, longitudinal median carina arising from anterior edge; vertex of head at least sharply angled, sometimes with a vaguely indicated transverse carina) *clypealis* sp. n. (p. 144)
 — Larger species (15–17 mm. long) (52)
- 52 (51) Clypeus without a longitudinal median carina arising from anterior edge; hind margin of pronotum with a raised hind border in front of scutellum; impressed median area of prosternum in front of anterior coxae glabrous
damarina Pér. (p. 145)

- Clypeus with a longitudinal median carina arising from anterior edge (as in Text-fig. 21); hind pronotal margin without a raised posterior border in front of scutellum; impressed median area of prosternum almost always setiferous (53)
- 53 (52) Intervals between coarse elytral punctures finely shagreened, without noticeable micropunctures; labral emargination strongly obtuse; apicosutural angles of elytra not produced to form a minute spine *laticia* n. n. (p. 148)
- Intervals between coarse elytral punctures smooth, or with traces of incomplete shagreening and with some scattered micropunctures; labral emargination almost rightangled; apicosutural angles of elytra slightly produced (Text-fig. 29) *ciliata* Burm. (p. 146)
- 54 (37) Colour black to pitchy; intervals between coarse pronotal and elytral punctures finely, but strongly shagreened, surface not very shining; maximum size about 16 mm. long; labral emargination usually acute, sometimes weakly obtuse (55)
- Without the above characters in combination (61)
- 55 (54) Labral emargination acute; lower ramus of all tarsal claws less than half as long as upper ramus and divergent from it (as in Text-figs. 10 and 14); *males* with length-ratio of apical spurs of hind tibiae at least 2 : 1 (*cf.* Text-fig. 49) *quaesita* Pér. (p. 149)
- If tarsal claws so formed and apical spurs of hind tibiae are with a length-ratio of 2 : 1 or more, then labral emargination rightangled or slightly obtuse (56)
- 56 (55) Labral emargination acute; *males* with upper ramus of all tarsal claws shorter and finer than lower (57)
- Labral emargination 90° or slightly more; *males* with upper ramus of all tarsal claws longer than lower (59)
- 57 (56) Elytral epipleura clearly marked from bases to apicosutural angles; all, or almost all setae of hind coxae fine, non-squamiform; lateral borders of elytra with outstanding setae from bases to level of third or fourth abdominal segment; elytra evenly punctured (58)
- Elytral epipleura progressively less clearly defined posteriorly beyond level of third abdominal segment, absent from apical borders (Text-fig. 43); most setae of hind coxae short, white and squamiform; lateral borders of elytra with outstanding setae confined to between bases and level of second abdominal segment; elytra distinctly less closely punctured toward apices than elsewhere *compacta* sp. n. (p. 150)
- 58 (57) Setae in discal punctures of pronotum and elytra white, squamiform, moderately large, readily visible to the naked eye; metepisterna and sometimes metasternum and hind coxae also, with a few large, squamiform setae *piceonigra* sp. n. (p. 151) (Text-fig. 2)
- Setae in punctures of pronotal and elytral discs minute, inconspicuous; metasternum, metepisterna and hind coxae with long, fine, non-squamiform setae in punctures, no squamiform setae present *spuria* Pér. (p. 152)
- 59 (56) Most setae of metasternum, metepisterna and hind coxae and abdominal segments broad, white, squamiform; clypeus without any trace of a longitudinal median carina; lateral borders of elytra with long, outstanding setae confined to between bases and level of hind coxae *pseudosquamifera* sp. n. (p. 152)
- Most setae of metasternum, metepisterna and hind coxae long, fine, non-squamiform; clypeus usually with a short longitudinal median carina arising from anterior edge (as in Text-fig. 22); lateral borders of elytra set with outstanding setae from bases to at least level of second or third abdominal segment (60)
- 60 (59) Larger species (13–16 mm. long); *female* only; punctures of pronotal disc small, transverse, usually emarginate along their anterior border (Text-fig. 7); elytra without setae along their apical borders *rotunda* sp. n. (p. 140)

- Smaller species (10–12 mm. long); *male* and *female*; pronotal punctures relatively much larger, almost circular, not emarginate anteriorly (Text-fig. 8); elytra usually with an apical fringe of short setae . . . *globator* (F.) (p. 141)
- 61 (54) Lateral and apical margins of elytra strongly shagreened between coarse punctures, intervals on disc comparatively smooth. [Squamiform setae of metasternum, episterna, hind coxae and abdominal segments much broader and more conspicuous than those of pronotum and elytra] . . . *livida* Klug (p. 153)
- Lateral and apical margins of elytra similarly sculptured to discs . . . (62)
- 62 (61) Labral emargination acute and most setae of metepisterna, hind coxae and posterolateral parts of metasternum large, white, squamiform, conspicuous; head usually with a more or less clearly marked transverse carina on vertex (not in *S. abenaba* sp. n.) . . . (63)
- If labral emargination acute then the majority of the setae in punctures of metasternum, episterna and hind coxae are fine and non-squamiform; vertex of head with or without a transverse carina . . . (70)
- 63 (62) Pronotum with a raised ridge along hind border in front of scutellum; *males* with length-ratio of apical spurs of hind tibiae less than 2 : 1; upper ramus of anterior tarsal claws not longer than lower . . . (64)
- Pronotum without a raised hind border in front of scutellum; *males* with length-ratio of apical spurs of hind tibiae variable; upper ramus of anterior tarsal claws longer or shorter than lower . . . (65)
- 64 (63) Head with a distinct transverse carina on vertex; intervals between coarse punctures of elytra smooth; pygidial punctures deep, close, separated by one diameter or less; intervals between coarse punctures of pronotum almost smooth . . . *salaama* Brske. (p. 155)
- Head without a raised carina across vertex; intervals between coarse elytral punctures coriaceous; pygidial punctures very shallow, sparse, separated as a rule by several diameters; intervals between coarse pronotal punctures with distinct, though fine microsculpture . . . *abenaba* sp. n. (p. 155)
- 65 (63) Anterior border of pronotum and that of hypomeron continuing in a more or less straight line when viewed from one side (Text-fig. 5); *males* with length-ratio of apical spurs of hind tibiae less than 2 : 1 and with upper ramus of anterior tarsal claws shorter and finer than lower . . . *usambarae* Brske. (p. 156)
- Anterior border of pronotum and that of hypomeron meeting at an angle when viewed from one side (as in *S. puerilis*, Text-fig. 35); *males* with length-ratio of apical spurs of hind tibiae 2 : 1 or more and with upper ramus of all tarsal claws longer or shorter than lower . . . (66)
- 66 (65) Lateral borders of elytra with stiff, outstanding setae from bases to level of hind coxae only . . . (67)
- Lateral borders of elytra with stiff, outstanding setae from bases almost to apical borders . . . (68)
- 67 (66) Intervals between coarse punctures on disc of pronotum smooth except for micropunctures; anterior pronotal border forwardly arcuate medially, evenly emarginate on either side from anterior angles to median arcuation . . . *continens* Pér. (p. 158)
- Intervals between coarse punctures of pronotal disc finely shagreened; anterior border of pronotum forwardly arcuate laterally behind eyes *neglecta* Boh. (p. 160)
- 68 (66) Larger species (15 mm. long or more); *males* with upper ramus of anterior tarsal claws shorter and finer than lower and with length-ratio of apical spurs of hind tibiae about 2 : 1; labral emargination weakly acute (75°–80°) . . . *scabiosa* Pér. (p. 161)
- Smaller species (12–13 mm. long); *males* with upper ramus of anterior tarsal claws distinctly longer than lower and with the length-ratio of the apical spurs of the hind tibiae more than 2 : 1; labral emargination strongly acute (c. 45°) . . . (69)

- 69 (68) Membraneous lateral edges of elytra as wide as epipleura (Text-fig. 44); propygidium transversely rugulose immediately above squamiferous apical punctures; pronotal intervals usually smooth except for micropunctures
mimocontinens sp. n. (p. 159)
- Membraneous lateral edges of elytra much narrower than epipleura; propygidium with discrete, transverse punctures immediately above squamiferous apical punctures; pronotal intervals usually with fine and extremely faint, reticulate microsculpture *kochi* sp. n. (p. 163)
- 70 (62) Labral emargination distinctly acute; posterior margin of pronotum with a distinct raised hind border in front of scutellum (71)
- If labral emargination acute, then pronotum without a raised hind border in front of scutellum (81)
- 71 (70) Much smaller species (9–11 mm. long); vertex of head with a clearly defined, though fine transverse carina (72)
- Larger species (more than 12 mm. long); vertex of head with or without a transverse carina (73)
- 72 (71) Pronotum with intervals between coarse punctures finely and faintly shagreened and set with minute punctures separated by from about six to ten diameters; *males* with upper ramus of at least the middle and hind tarsal claws longer than lower; setae in punctures of metasternum, episterna and hind coxae fine, non-squamiform *inedita* Pér. (p. 98)
- Pronotum with intervals between coarse punctures smooth, shining, without micropunctures; *males* with upper ramus of all tarsal claws finer and distinctly shorter than lower; metasternum, episterna and hind coxae with small squamiform setae as well as non-squamiform hairs *matabelana* Pér. (p. 163)
- 73 (71) Lateral borders of pronotum distinctly crenulate when viewed from the side (Text-fig. 38); colour variable; tarsal claws variably constructed (74)
- Lateral borders of pronotum almost without crenulation except for a few notches behind middle; colour usually dark red-brown; tarsal claws of both sexes with upper ramus longer than lower on all legs *puncticollis* Boh. (p. 164)
- 74 (73) Vertex of head sharply angled, but without a transverse carina; *males* with upper ramus of tarsal claws slightly shorter and finer than lower; head as in Text-fig. 24 when viewed from above *ovampoana* Pér. (p. 166)
- Vertex of head with a raised transverse carina; *males* with upper ramus of tarsal claws longer or shorter than lower; head with upper anterior edge of clypeus and clypeal carina not approaching each other so closely as in *ovampoana* Pér. (75)
- 75 (74) Intervals between coarse punctures of pronotum and elytra smooth except for micropunctures; *males* with lamellae of antennal club a little longer than funicle *profuga* Pér. (p. 167)
- Intervals between coarse punctures of pronotum finely shagreened; intervals between coarse punctures of elytra frequently with fine shagreening also; *males* with lamellae of antennal club up to twice as long as funicle (76)
- 76 (75) Raised hind border of pronotum clear and uninterrupted between hind angles (77)
- Raised hind border of pronotum partly obliterated by punctures toward hind angles (78)
- 77 (76) Upper ramus of all tarsal claws always longer than lower; clypeal carina evenly arcuate; intervals between coarse elytral punctures usually finely shagreened; antennae always 10-segmented *citima* Pér. (p. 169)
- Upper ramus of all tarsal claws shorter and finer than lower; clypeal carina angled medially; intervals between coarse elytral punctures usually smooth or almost so; antennae often 9-segmented, or with the fourth and fifth segments partially fused *salisburiana* Pér. (p. 170)

- 78 (76) Pronotum much less closely punctured on posterior half of disc than elsewhere ; upper ramus of all tarsal claws shorter and finer than lower ; clypeus broadest before frontoclypeal junction ; impressed median area of prosternum in front of anterior coxae glabrous *spectabilis* Pér. (p. 171)
- Pronotum more or less evenly punctured ; upper ramus of all tarsal claws obviously longer than lower ; impressed median area of prosternum setiferous (as in Text-fig. 6P) (79)
- 79 (78) Larger species (18–21 mm. long) ; pectoral setae sparse, shorter along hind coxae than elsewhere ; colour usually very dark castaneous to fuscous *valida* Boh. (p. 172)
- Smaller species (12–17 mm. long) ; all pectoral setae long and fine, densely set ; colour usually pale testaceous to pale castaneous (80)
- 80 (79) Smaller species (12–14 mm. long) ; labral emargination weakly acute (c. 80°) ; setae in punctures of pronotal and elytral discs relatively larger, narrowly squamiform *vryburgensis* sp. n. (p. 174)
- Larger species (15–17 mm. long) ; labral emargination more strongly acute (c. 60°) ; pronotal and elytral setae relatively smaller and less conspicuous, scarcely squamiform, if at all *rufina* Boh. (p. 175)
- 81 (70) Labral emargination acute ; pronotum without a raised hind border in front of scutellum (82)
- Labral emargination 90° or more ; pronotum with or without a raised hind border in front of scutellum (87)
- 82 (81) Clypeus shorter along midline than frons ; setae in punctures on posterior parts of metasternum, metepisterna and hind coxae minute, inconspicuous ; antennae 9-segmented *straminea* (Pér.) (p. 176)
- Clypeus at least as long as frons in midline ; most setae in punctures of posterior parts of metasternum, metepisterna, and hind coxae long, conspicuous ; antennae 10-segmented (83)
- 83 (82) Underside of hind femora with posterior row of setiferous punctures approaching apex less closely (Text-fig. 47) ; anterior border of pronotum and that of hypomeron continuing in an almost straight line when viewed from the side (as in *S. bohemani*, Text-fig. 36) (84)
- Underside of hind femora with posterior row of setiferous punctures approaching apex more closely (Text-fig. 46) ; anterior border of pronotum and that of hypomeron meeting at an angle when viewed from the side (85)
- 84 (83) Pygidium very closely and strongly punctured, punctures separated by less than one diameter as a rule ; pygidium more or less evenly convex when viewed from above ; clypeal carina evenly arcuate *rhodesiana* Moser (p. 177)
- Pygidium shallowly punctured, punctures separated by more than one diameter, often by more than two diameters ; pygidium much more convex laterally than across disc when viewed from above ; clypeal carina bluntly angled medially *manicana* Pér. (p. 178)
- 85 (83) Outstanding setae along lateral borders of pronotum shorter than basal anterior tarsal segment ; head between eyes across vertex relatively narrower compared with maximum pronotal width (70 : 165) ; *males* with upper ramus of anterior tarsal claws much shorter and finer than lower and with the shorter of the two apical spurs of the hind tibiae more than half as long as and narrower than the longer spur (86)
- Outstanding setae along lateral borders of pronotum longer than basal anterior tarsal segment ; head between eyes across vertex broader in proportion to maximum pronotal width (85 : 165) ; *males* with upper ramus of all tarsal claws longer than and as broad at base as lower and with the length-ratio of the apical spurs of the hind tibiae more than 2 : 1, the shorter spur broader than the longer one *constrata* Pér. (p. 179)

- 86 (85) Relatively more elongate species (14.5–15 mm. $\times$ 7.5 mm.); third (basal) external tooth of anterior tibiae well marked; castaneous; eighth antennal segment shining along midline, but matt along lateral margins
scabiosa Pér. (p. 161)
- Relatively less elongate species (14–15 mm. $\times$ 8–8.5 mm.); third external tooth of anterior tibiae feebly indicated; colour pitchy-red; eighth antennal segment shining all over its exposed surface
inostralis sp. n. (p. 180)
- 87 (81) Hind margin of pronotum with a raised posterior border in front of scutellum (Text-fig. 9); vertex of head with a well-marked transverse carina; intervals between coarse pronotal punctures smooth except for micropunctures; large insects (c. 15 mm. $\times$ 8 mm.)
profuga Pér. (p. 167)
- Pronotum without a raised posterior border in front of scutellum, or if with a raised border then head without a transverse carina on vertex; pronotal intervals variably sculptured; size variable (88)
- 88 (87) Small species (10.5–12 mm. long); upper ramus of all tarsal claws shorter and finer than lower; colour testaceous; most setae of abdominal segments short, obovate, white, appressed, squamiform; head strongly narrowed from broadest point to vertex (95 : 75)
gracilis Brske. (p. 110)
- Size variable; upper ramus of middle and hind tarsal claws always longer than lower; if setae of abdominal segments in part squamiform, then narrowly and pointedly so, not or scarcely broader than those of upper surfaces; head feebly narrowed from broadest point to vertex (89)
- 89 (88) Epipleurae almost obliterated along apical half of elytra, continuing in the same plane as the lateral margins of the elytra, but distinguishable from the latter by different surface sculpture; approximately 14 mm. long
deceptor sp. n. (p. 182) (Text-fig. 1)
- Epipleurae distinct from bases to apicosutural angles of elytra, set at an angle to the lateral margins of the elytra; size variable (90)
- 90 (89) Colour pale yellow-testaceous; small (9–11 mm. long); setae of metepisterna and hind coxae minute; anterior border of pronotum and that of hypomeron meeting at an angle when viewed from the side (as in *S. puerilis*, Text-fig. 35); males with the antennae 9-segmented and with the apices of the hind tibiae produced into a curved spine (Text-fig. 48)
inverta (Pér.) (p. 183)
- Without the above characters in combination (91)
- 91 (90) Small species (c. 10 mm. long); very dark red-brown in colour; pronotum without distinct, transverse, subbasal, impunctate areas; vertex of head sharply angled and with a feebly raised, transverse carina. (Setae of hind coxae short and appressed, but non-squamiform)
minor sp. n. (p. 184)
- Larger species (11 mm. long or more); colour variable; pronotum with distinct transverse, subbasal, impunctate areas (cf. Text-fig. 32); head with vertex angled or blunt, with or without a transverse carina (92)
- 92 (91) Clypeus with a short, longitudinal median carina arising from anterior edge (Text-fig. 21); species always more than 15 mm. long; anterior edge of clypeus biarcuate; intervals between coarse punctures of elytra with micropunctures as well as traces of shagreening (93)
- Clypeus without any trace of a longitudinal median carina; anterior edge of clypeus variable in outline; size variable; intervals between coarse elytral punctures variably sculptured (94)
- 93 (92) Labral emargination almost rightangled; lateral borders of elytra with stiff, outstanding setae from bases to apicosutural angles; punctures of pronotal disc not asperose
ciliata Burm. (p. 146)
- Labral emargination obviously obtuse; lateral borders of elytra with stiff, outstanding setae from bases to level of third abdominal segment; punctures of pronotal disc distinctly asperose
perforata Burm. (p. 185)

- 94 (92) Labral emargination approximately rectangular (Text-figs. 17 and 18); species more than 12.5 mm. long (95)
- Labral emargination obviously obtuse (Text-fig. 19); size variable (98)
- 95 (94) Anterior border of pronotum straight medially (Text-fig. 39); head at least sharply angled at vertex, frequently with a raised, transverse carina; size larger (14.5–16 mm. long or more); pronotum not, or scarcely narrowed from broadest point to base (96)
- Anterior border of pronotum forwardly arcuate medially (Text-fig. 31); head neither sharply angled at vertex nor with a transverse carina across vertex; size smaller (13–15 mm. long); pronotum obviously broader near middle than at base *abscondita* sp. n. (p. 186)
- 96 (95) Lateral borders of elytra with stiff, outstanding setae from bases to level of second abdominal segment only; lower ramus of tarsal claws less than half as long as upper and divergent from it (Text-fig. 10); intervals between coarse pronotal punctures set with micropunctures as well as being finely shagreened *abrupta* sp. n. (p. 181)
- Lateral borders of elytra set with stiff, outstanding setae from bases to level of at least fourth abdominal segment; lower ramus of tarsal claws not as in Text-fig. 10; intervals between coarse pronotal punctures finely shagreened, but without micropunctures (97)
- 97 (96) Setae along lateral borders of pronotum longer than basal anterior tarsal segment; *males* with upper ramus of anterior tarsal claws longer than lower and eighth antennal segment shining over the whole of its exposed surface *capensis* Burm. (p. 187)
- Setae along lateral borders of pronotum shorter than basal anterior tarsal segment; *males* with upper ramus of anterior tarsal claws shorter and finer than lower and with eighth antennal segment shining along the midline of its exposed surface, but matt along its lateral margins *scabiosa* Pér. (p. 161)
- 98 (94) Vertex of head sharply angled, usually bearing a transverse carina; larger species, usually more than 13 mm. long (99)
- If head with a vaguely indicated carina across vertex, then size less than 12 mm. long (100)
- 99 (98) Raised borders of pygidium broader apically than along sides (Text-fig. 26); intervals between coarse punctures of pronotum and elytra with fine, but distinct and complete microsculpture; *males* with length-ratio of apical spurs of hind tibiae less than 2 : 1 and with lower ramus of tarsal claws at least half as long as upper and closely applied to it *fartula* Pér. (p. 126)
- Raised borders of pygidium as narrow apically as elsewhere; intervals between coarse punctures of pronotum and elytra with faint, incomplete shagreening, or almost smooth except for micropunctures; *males* with length-ratio of apical spurs of hind tibiae at least 2 : 1 and with lower ramus of all tarsal claws less than half as long as upper and widely divergent from it (Text-fig. 10) *abrupta* sp. n. (p. 181)
- 100 (98) Lateral borders of pronotum not crenulate for anterior fourth; lateral borders of elytra set with outstanding setae from bases to at most the level of the hind coxae; clypeal carina sharp, more or less evenly arcuate (101)
- Lateral borders of pronotum crenulate from anterior to posterior angles; lateral borders of elytra set with outstanding setae from bases to apices; clypeal carina blunt, distinctly more strongly arcuate medially than laterally *boschimana* Pér. (p. 189)
- 101 (100) Anterior edge of clypeus depressed medially (Text-fig. 25), more or less evenly arcuate when viewed from above; frons without any trace of a longitudinal median carina *geilenkeuseri* Brske. (p. 190)

- Anterior edge of clypeus not depressed medially; distinctly flattened medially when viewed from above; frons usually with a weakly indicated longitudinal median carina *meracula* Pér. (p. 191)
- 102 (33) Pronotum with a raised hind border which is uninterrupted between hind angles of pronotum; anterior border of pronotum strongly sinuate toward anterior angles; head strongly narrowed from frontoclypeal junction to vertex, which bears a sharp, transverse carina (103)
- Pronotum without a raised hind border in front of scutellum, or if with a border then it is obliterated, or partly obliterated by punctures toward hind angles of pronotum; anterior border of pronotum evenly emarginate or sinuate toward anterior angles; head narrowed or parallel-sided from frontoclypeal junction to vertex which may or may not have a transverse carina (104)
- 103 (102) Tarsal claws with upper ramus at most as long as lower; most setae of metepisterna, hind coxae and posterolateral parts of metasternum large, white, appressed and squamiform, much larger than those of upper surfaces; setae on apical third of pygidium much longer than those elsewhere on its surface *inops* Pér. (p. 108)
- Tarsal claws with upper ramus distinctly longer than lower; most setae of metepisterna, hind coxae and posterolateral parts of metasternum long, fine, subrecumbent, non-squamiform; pygidium with very short setae in all punctures *citima* Pér. (p. 169)
livada n. n. (p. 168)
- 104 (102) Clypeal carina strongly arcuate; posterior angles of pronotum sharply formed; lower ramus of all tarsal claws at least half as long as upper and usually as broad at base as upper ramus (105)
- Clypeal carina straight medially or slightly bisinuate; posterior angles of pronotum briefly rounded (Text-fig. 37); *males* with lower ramus of tarsal claws less than half as long as upper and distinctly narrower at its base (as in Text-fig. 14) *inscita* (Pér.) (p. 192)
- 105 (104) Intervals between coarse punctures of pronotum and elytra finely, but strongly shagreened; surface dull; colour black to pitchy as a rule; head not narrowed from a little in front of frontoclypeal suture to vertex; vertex without a raised transverse carina and without a transverse groove; anterior border of pronotum evenly emarginate (106)
- Intervals between coarse elytral punctures almost or quite smooth, surface shining, or if shagreened then colour testaceous to castaneous and head with a transverse groove across vertex (108)
- 106 (105) Some setae of metasternum, metepisterna, hind coxae and abdominal segments white, squamiform, conspicuous; outstanding setae along lateral borders of elytra extending from bases to, or almost to, apices; *males* winged (107)
- All setae of metasternum, metepisterna, hind coxae and abdominal segments non-squamiform, inconspicuous; outstanding setae along lateral borders of elytra confined to between bases and level of hind coxae; both sexes with reduced, non-functional wings *globa* sp. n. (p. 193) (Text-fig. 4)
- 107 (106) Squamiform setae of the upper surfaces broad, conspicuous to the naked eye, rounded apically *squamifera* Wallengren (p. 195)
- Setae of upper surfaces small, inconspicuous, narrowly squamiform, not rounded apically *carbonaria* Boh. (p. 196)
- 108 (105) Pronotum with a raised hind border in front of scutellum, or if without such a border than anterior border of pronotum obviously sinuate toward anterior angles (110)

- Pronotum without a raised hind border medially and with anterior border evenly emarginate (109)
- 109 (108) Labral emargination distinctly acute; outstanding setae along lateral borders of elytra confined to between bases and level of hind coxae; metepisterna, hind coxae and posterolateral parts of metasternum set with short, broad, white, squamiform setae *dissimilis* Pér. (p. 197)
- Labral emargination 90° or more; outstanding setae along lateral borders of elytra extending from bases to level of second or third abdominal segment; metasternum, metepisterna and hind coxae with all, or almost all setae long, fine and non-squamiform *saga* Pér. (p. 198)
- 110 (108) Head at least sharply angled at vertex, vertex either with a transverse carina or with a transverse groove (111)
- Head not sharply angled at vertex which is without either a transverse carina or groove (116)
- 111 (110) Derm pale testaceous to pale castaneous, head and pronotum often slightly darker than elytra; lateral borders of elytra with stiff, outstanding setae confined to between bases and level of hind coxae, or if setae extend backward beyond this point then size of insect smaller (less than 11 mm. long) (112)
- Derm dark pitchy-red; lateral elytral borders with long, outstanding setae from bases almost to apical borders; species at least 12.5 mm. long *perplexabilis* Pér. (p. 199)
- 112 (111) Labral emargination strongly acute (cf. Text-fig. 16) (113)
- Labral emargination 90° or more (115)
- 113 (112) Intervals between coarse punctures of pronotum smooth, shining; lateral borders of elytra with stiff, outstanding setae from bases to within about one third from apices; small species (c. 9 mm. long) *matabelana* Pér. (p. 163)
- Intervals between coarse punctures of pronotum with fine shagreening; lateral borders of elytra with stiff, outstanding setae confined to between bases and level of hind coxae; size variable (114)
- 114 (113) Smaller species (c. 10 mm. long); head with a transverse groove on vertex; *males* with antennae 9-segmented and upper ramus of all tarsal claws shorter and finer than lower; prosternum without setae on either side near its junction with hypomeron *filiola* Moser (p. 200)
- Larger species (c. 12 mm. long); vertex of head with a conspicuous transverse carina; *males* with upper ramus of all tarsal claws longer than lower and with antennae 10-segmented; prosternum with a few setae on either side near its junction with hypomeron *dilucida* Brske. (p. 201)
- 115 (112) Smaller species (less than 10.5 × 5.5 mm.); elytra with intervals between coarse punctures somewhat irregularly raised, but without definite micro-sculpture; anterior angles of pronotum not forwardly produced when viewed from above *infans* (Pér.) (p. 202)
- Larger species (at least 11.5 × 6.5 mm.); intervals between coarse elytral punctures finely shagreened; anterior angles of pronotum usually slightly produced when viewed from above (Text-fig. 33) *corrosa* Burm. (p. 203)
- 116 (110) Median gap in row of setiferous punctures along anterior face of clypeus bridged by non-setiferous punctures (117)
- Median gap in row of setiferous punctures along anterior face of clypeus not bridged by non-setiferous punctures (118)
- 117 (116) Small species (c. 9 mm. long); dark fuscous; upper surfaces with large, white, conspicuous, squamiform setae in punctures; *males* with antennae 10-segmented and with upper ramus of all tarsal claws longer than lower *minima* Pér. (p. 205)

- Usually larger species (11–13 mm. long); pale testaceous; upper surfaces with minute, inconspicuous setae in punctures; *males* with antennae 9-segmented and with upper ramus of all tarsal claws shorter and finer than lower *affinis* Boh. (p. 206)
- 118 (116) Anterior border of pronotum forwardly arcuate medially as in Text-fig. 31. [Medium sized species—14–15 × 7–8 mm.—upper and lower rami of all tarsal claws of almost equal length (Text-fig. 12)] . . . *fimbriata* Brenske (p. 207)
- Anterior border of pronotum not forwardly arcuate medially (119)
- 119 (118) Intervals between coarse punctures of pronotal disc finely shagreened . . . (120)
- Intervals between coarse punctures of pronotal disc not finely shagreened . . . (122)
- 120 (119) Outstanding setae along lateral borders of pronotum at least as long as greatest width of anterior tibiae; posterior pronotal angles obviously obtuse (121)
- Outstanding setae along lateral borders of pronotum scarcely more than half as long as maximum width of anterior tibiae; lateral borders of pronotum abruptly sinuate shortly before hind angles which are almost rightangled (Text-fig. 34) *natalensis* Brenske (p. 210)
- 121 (120) Metasternum, metepisterna and hind coxae with fine, non-squamiform setae in punctures; *males* with upper ramus of all tarsal claws shorter and finer than lower *russula* Boh. (p. 209)
- Metasternum, metepisterna and hind coxae with large, white, squamiform setae as well as some fine, non-squamiform hairs; *males* with upper ramus of all tarsal claws longer than lower *perplexabilis* Pér. (p. 199)
- 122 (119) Antennae 9-segmented; *males* with metasternum, metepisterna and hind coxae bearing long, fine, densely set, yellow setae in punctures; postero-median parts of metasternum as closely punctured as elsewhere *ovatula* Brenske (p. 211)
- Antennae 10-segmented; both sexes with some short, appressed, frequently squamiform setae on metasternum, metepisterna and hind coxae . . . (123)
- 123 (122) Smaller species (*c.* 10 mm. long); pale testaceous; *males* with lamellae of antennal club about twice as long as funicle *fraudigera* Pér. (p. 212)
- Larger species (12 mm. long or more); usually castaneous to piceous (except for *S. rurigena* which may be lighter in colour); *males* with lamellae of antennal club little longer than funicle (5:4) (124)
- 124 (123) Pronotum and elytra with punctures bearing minute, non-squamiform, inconspicuous setae not longer than the diameter of a puncture; *males* with upper ramus of all tarsal claws shorter and finer than lower; posterior angles of pronotum rightangled; lateral borders of pronotum sinuate shortly in front of posterior angles (Text-fig. 34) . . . *natalensis* Brenske (p. 210)
- Pronotum and elytra with punctures bearing larger, narrowly squamiform setae, usually longer than the diameter of a puncture; *males* with upper ramus of all tarsal claws longer than lower; posterior angles of pronotum obviously obtuse (125)
- 125 (124) Lateral borders of elytra set with stiff, outstanding setae from bases to apical borders *pauperata* Pér. (p. 213)
- Lateral borders of elytra set with stiff, outstanding setae from bases to level of hind coxae, setae behind this point much shorter and more or less appressed *rurigena* Brenske (p. 215)

S. saginata Pér.*Schizonycha saginata* Péringuey, 1904, p. 201.

Length 13 mm. Breadth 8 mm.

FEMALE

Derm black, not strongly shining. *Head* with labral emargination strongly obtuse; anterior clypeal face vertically convex and without a median gap in its row of setiferous punctures; anterior edge of clypeus broadly truncate medially; clypeal carina moderately arcuate; vertex with a strongly raised transverse carina; frons about one and a half times as long in midline as clypeus; clypeal punctures elongate; frontal punctures asperose, each puncture bearing a small, squamiform seta. *Pronotum* with anterior border evenly emarginate; anterior angles obtuse posterior angles entirely rounded; lateral borders fringed with setae often longer than basal anterior tarsal segment; surface with a pair of transverse, subbasal, impunctate areas, one on either side of midline, and a longitudinal median impunctate space; disc elsewhere asperoso-punctate, punctures bearing prominent, squamiform setae; intervals between punctures with fine shagreening; posterior margin without a raised hind border in front of scutellum. Scutellum transverse; set with three annulate punctures; surface finely shagreened. *Elytra* with punctures each bearing a prominent, squamiform seta similar to those of pronotum; intervals between punctures finely shagreened; lateral borders set with stiff, outstanding setae for basal third, median and apical thirds set with bunches of short, stiff setae giving a brush-like appearance. Pygidium annulate-punctate, punctures more closely set basilaterally; intervals finely shagreened. Metasternum, episterna and hind coxae with long, somewhat sparsely set setae. Abdominal segments with most setae arranged in transverse rows, a few squamiform setae also present laterally. *Legs* with anterior tibiae strongly tridentate externally; basal hind tarsal segment a little longer than second; tarsal claws with upper ramus more than twice as long as lower ramus and divergent from it.

MALE. Unknown.

Type locality: Bushmanland, Cape Province (S.A.M.).

The *female* type specimen is the sole example of the species known to me. I have been unable to associate it with any *male*.

S. durbana Pér.

Schizonycha durbana Péringuey, 1904, p. 219.

Length 12.5 mm. Breadth 6 mm.

MALE

Colour piceous—black. *Head* with labral emargination strongly obtuse; anterior clypeal face vertically convex, with a moderately broad median gap in its row of setiferous punctures; clypeal carina feebly arcuate; frontoclypeal suture clearly visible; vertex with a well marked transverse carina; broadest part of clypeus little broader than head across vertex; punctures of clypeus and frons closely set, irregular. *Pronotum* with anterior border feebly sinuate laterally, anterior angles obtuse; posterior angles rounded; posterior margin with a distinct raised hind border in front of scutellum; lateral borders with outstanding setae not longer than basal

anterior tarsal segment ; surface with transverse, subbasal, impunctate areas ; disc set with annulate punctures of varying size and separation ; punctures more closely set antero-laterally, each bearing a minute, white, squamiform seta ; intervals finely, but strongly shagreened. Scutellum impunctate ; transverse ; surface finely shagreened. *Elytra* with punctures separated by somewhat less than one diameter, bearing small, white, squamiform setae ; intervals finely shagreened ; lateral borders with outstanding testaceous setae from bases to apical borders. Pygidium slightly transverse ; set with irregularly spaced, annulate punctures bearing minute, white, squamiform setae ; intervals finely, but as strongly shagreened as those of elytra. Metasternum, episterna and hind coxae set with long, rather sparsely arranged setae. Abdominal segments with scabrose punctures arranged in transverse rows across middle of segments, rows obscured by the addition of more punctures toward lateral margins ; setae across middle of segments fine, those of punctures toward lateral margins smaller, squamiform ; intervals finely shagreened, more strongly so laterally. *Legs* with anterior tibiae tridentate ; basal hind tarsal segment about three fourths as long as second ; upper ramus of tarsal claws about twice as long as lower and as broad at base.

Genitalia (Text-figs. 52 and 53).

FEMALE. Unknown to me. According to Péringuey, the *female* is very like the *male*.

Type locality : Durban, Natal (S.A.M.).

The male type specimen is the sole example of this species that I have seen.

S. inedita Pér.

Schizonycha inedita Péringuey, 1904, p. 210.

Length 10-12.5 mm. Breadth 5-5.5 mm.

MALE

Ferruginous. *Head* with labral emargination strongly acute (Text-fig. 16) ; anterior clypeal face reflexed medially, not convex vertically, with a moderately broad median gap in its row of setiferous punctures ; clypeal carina arcuate and frequently angulate medially ; anterior edge of clypeus shallowly emarginate medially, broadly rounded toward eyes ; vertex with a well marked transverse carina ; head strongly narrowed from frontoclypeal suture to vertex ; clypeal punctures elongate ; frontal punctures irregularly asperose ; both frontal and clypeal punctures bearing minute, pale yellow setae. *Pronotum* with anterior border shallowly arcuate medially, strongly sinuate laterally ; anterior angles obtuse ; posterior angles very strongly obtuse, sometimes obsolete ; posterior margin with a raised hind border in front of scutellum ; outstanding setae along lateral borders shorter than basal anterior tarsal segment ; surface with well marked transverse, sub-basal impunctate areas ; discal punctures coarse, sometimes slightly transverse and with emarginate anterior borders, separated by from one to about two diameters, slightly more closely arranged toward anterior border ; punctures bearing minute,

fine setae scarcely longer than the diameter of a puncture; intervals between coarse punctures set with micropunctures and sometimes finely and faintly shagreened as well. Scutellum almost equilateral; annulate-punctate laterally; intervals quite strongly shagreened. *Elytra* with punctures separated by about one diameter; intervals as on pronotal disc; coarse punctures each bearing a minute, non-squaliform seta; lateral borders with stiff, outstanding setae from bases to level of apical border of fourth abdominal segment. Pygidium transverse (c. 4:5); punctures annulate and of very variable depth and separation, bearing setae similar to those of elytral punctures; intervals finely shagreened. Metasternum, episterna and hind coxae with long, fine, pale yellow setae in punctures; punctures, except on posteromedian metasternal area, separated by their own diameter or less. Abdominal segments with sparse, setiferous punctures arranged in transverse rows medially; punctures more closely and less regularly arranged toward and along lateral margins; setae in punctures generally shorter than those of hind coxae except for some on penultimate abdominal segment; intervals almost smooth. *Legs* with anterior tibiae tridentate; basal hind tarsal segment about three fourths as long as second segment; tarsal claws with upper ramus as broad at base as and longer than lower.

Genitalia (Text-figs. 54 and 55).

FEMALE. Very similar to the *male* but with shorter lamellae to the antennal club.

Type locality: NE. Damaraland (S.A.M.).

Other material examined from: S-W. Africa: Zesfontein (S.A.M.); Kamanjab (S.A.M.); Outjo (S.A.M.); Otjimbombe (S.A.M.); Ombombo (S.A.M.); Kaoko Otavi (S.A.M.); Narebis (S.A.M.); Beullesport (S.A.M.); Otjikoto Lake; Aba-chaus, Otjiwarongo Dist. (B.S.S.); Unlocalized (Z.M.B.).

Total material seen: More than 26 examples.

The variation in the degree of obtuseness of the posterior angles of the pronotum in this species has led to its appearing in two places in the key above. The form with almost entirely obsolete hind angles to the pronotum appears to be uncommon, but includes the type specimen.

S. feirana Pér.

Schizonycha feirana Péringuey, 1908, p. 699.

Length 14.5 mm. Breadth 7 mm.

MALE

Derm reddish castaneous. *Head* with labral emargination almost rightangled; anterior clypeal face reflexed medially, but not vertically convex; clypeal carina very feebly arcuate; vertex with a well marked transverse carina which is slightly arcuate when viewed from above; frontal and clypeal punctures elongate; intervals set with micropunctures. *Pronotum* with anterior border strongly sinuate laterally, directed obliquely backward to anterior angles; posterior angles entirely rounded; posterior margin with a distinct raised hind border in front of scutellum; lateral

borders set with outstanding setae shorter than basal anterior tarsal segment; surface with transverse, subbasal impunctate areas; disc set with transverse punctures having emarginate anterior borders and separated by more or less their own diameter; punctures more closely set elsewhere, especially anterolaterally where they are slightly scabrose; setae in punctures minute; intervals finely shagreened and set with micropunctures as on head. Scutellum somewhat broader than long and closely punctured anteriorly; intervals finely and faintly shagreened. *Elytra* with punctures emarginate anteriorly and separated by about one diameter; punctures each bearing a minute, white seta; intervals slightly roughened and set with micropunctures; lateral borders with rather short, outstanding setae from bases almost to apical borders. Pygidium transverse; set with rather shallow, annulate punctures, separated by about their own diameter for the most part and bearing minute, white setae; intervals finely shagreened. Metasternum, episterna and hind coxae sparsely setose; setae on anterior half of metasternum much longer than those elsewhere. Abdominal segments with punctures arranged in more or less regular transverse rows, most punctures bearing fine setae, but toward lateral margins, some punctures bear short, squamiform setae; intervals finely shagreened laterally, punctures toward lateral margins asperose. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment as long as second; tarsal claws with upper ramus slightly longer than lower and closely applied to it.

Genitalia (Text-figs. 56 and 57).

FEMALE. Unknown to me. According to Péringuey, it differs from the *male* as follows: (a) The clypeus is not emarginate anteriorly. (b) The clypeal carina is broadly triangular and the transverse carina across the vertex of the head is less well-marked. (c) The pronotal punctures are "Variolose", the pronotal disc has an abbreviated longitudinal median impunctate area and the subbasal impunctate areas are less well-marked. (d) The elytral punctures are slightly more asperose.

This is an unusually strongly developed sexual dimorphism for a species of *Schizonycha*. Unless the *female* is flightless, it is usually much more like the *male* than is implied by Péringuey in the case of this species. On the face of it the likelihood is that Péringuey described the *female* of quite another species as the *female* of *S. feirana*.

Type locality: Feira, Zambezi River (S.A.M.).

The type specimen is the only example of this species known to me.

S. transvaalica Pér.

Schizonycha transvaalica Péringuey, 1904, p. 208.

Length 11 mm. Breadth 5 mm.

MALE

This species is very closely allied to *S. feirana*, but is smaller. It differs from the latter species as indicated in the key to species and also in that the transverse carina across the vertex of the head is more feebly raised and the fine shagreening of the intervals between the pronotal punctures is stronger.

Genitalia (Text-figs. 58 and 59).

FEMALE. Very similar to the *male*.

Type locality: Between the Zambezi and the Limpopo, S. Rhodesia (S.A.M.).

Other material examined from: S-W Africa: Otjiwarongo (S.A.M.); Windhoek (S.A.M.); Tsumeb (S.A.M.). Bechuanaland: Nata (F.).

Total material seen: 5 examples.

S. languens Pér. (Text-figs. 17, 23 and 51)

Schizonycha languens Péringuey, 1904, p. 234.

Length 10.5–11.5 mm. Breadth 5.5–6 mm.

In general appearance this species is very closely related to *S. ignava* Pér., but differs from it as indicated in the key to species and also in the following respects:

The pronotal punctures are scabrose along the extreme anterior margin of the pronotum only and the setae of the pronotal disc are hardly noticeable; the raised hind border of the pronotum is well marked medially; the elytra are somewhat less coarsely and closely punctured; the squamiform setae of the metepisterna, hind coxae and abdominal segments are much larger than those of the elytra; the basal hind tarsal segment is about two thirds as long as the one following.

Genitalia (Text-figs. 63 and 64).

FEMALE. Very like the *male*, but differs in having the upper ramus of all tarsal claws longer than the lower. The body is broader than that of the *male* and the pygidium is very abruptly and strongly convex at the apex (Text-fig. 51) instead of being evenly and rather shallowly convex over the apical half.

Type locality: Bothaville, Kroonstad, Orange Free State (S.A.M.).

Other material examined from: Transvaal: Pretoria; Potchefstroom (F.); Rustenburg. O.F.S.: Parys (F.). "Int. S. Afr." (no exact locality).

Total material seen: 23 examples.

S. ambigua Pér.

Schizonycha ambigua Péringuey, 1908, p. 681.

Length 10 mm. Breadth 5 mm.

MALE

This species is very closely related to *S. languens* despite Péringuey's remark concerning its relationship with *S. puerilis* and *S. infantilis*.

In fact it may hardly be separated from *languens* other than by the characters given in the key.

Genitalia (Text-figs. 60 and 61).

FEMALE. Unknown.

Type locality: Southern Rhodesia: Plumtree (S.A.M.).

Other material examined from: Transvaal: Mooiplaats (F.).

The type specimen bears a note saying that the genitalia have been sent to Raffray. Figs. 60 and 61 are drawn from the specimen in the G. Frey Museum, Munich.

Total material seen : 2 examples.

S. ignava Pér.

Schizonycha ignava Péringuey, 1904, p. 234.

Length 8.5–11 mm. Breadth 5–6.25 mm.

MALE

Colour testaceous with head, pronotum and legs darker. *Head* with labral emargination strongly obtuse ; anterior clypeal face moderately convex vertically, with an entire row of setiferous punctures ; clypeal carina arcuate laterally, almost straight medially ; frontoclypeal suture biarcuate ; vertex with a well-marked transverse carina which is forwardly arcuate medially when viewed from above ; clypeus and frons closely punctured ; frontal punctures more closely set than those of clypeus, slightly asperose ; punctures of both clypeus and frons bearing small, but distinct setae. *Pronotum* with anterior border sinuate laterally ; anterior angles obtuse ; posterior angles more or less rounded ; posterior margin with a raised hind border which is almost obliterated medially ; lateral borders with outstanding setae a little shorter than basal anterior tarsal segment ; surface with well marked transverse, subbasal impunctate areas ; surface set with setiferous punctures, obviously asperose anteriorly and on two mediolateral areas, feebly asperose elsewhere ; punctures variably spaced, sometimes separated by less than one diameter, bearing conspicuous, slightly squamiform setae ; intervals finely shagreened. Scutellum transverse (3 : 5) ; coarsely punctate laterally, punctures bearing setae similar to those of pronotum ; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, each bearing a squamiform seta similar to those of pronotum ; lateral borders with stiff, outstanding setae from bases to about halfway from bases, fringed thence to apicosutural angles with minute setae much smaller than on elytral surfaces. Pygidium transverse, punctures bearing setae slightly smaller than those of elytra ; intervals finely shagreened, less strongly so toward apex. Metasternum, episterna and hind coxae with long, rather coarse, sparsely set setae ; episterna with a few, short, squamiform setae present as well ; intervals between punctures frequently greater than their diameter and finely shagreened. Abdominal segments with punctures more closely set laterally than medially, asperose, some bearing short, squamiform setae similar to those of elytra ; intervals finely shagreened laterally, less strongly so toward midline. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment very slightly shorter than second ; tarsal claws with upper ramus shorter than lower on anterior legs, longer on middle and hind legs.

Genitalia (Text-fig. 62).

FEMALE. Unknown.

Type locality : Lydenburg, Transvaal (S.A.M.).

This species is known to me from the type specimen alone.

S. bohemani n. n.

Schizonycha bohemani n. n. pro.

Schizonycha affinis Péringuey (*nec* Boheman), 1904, p. 233.

Length 12-14 mm. Breadth 5.5-6 mm.

MALE

Colour pale testaceous with head and pronotum slightly darker. *Head* with labral emargination strongly obtuse ; anterior clypeal face feebly convex vertically and with an almost complete row of setiferous punctures along it ; clypeal carina and frontoclypeal suture biarcuate ; basal cephalic carina strongly raised, forwardly arcuate when viewed from above ; clypeus and frons variably punctured, punctures transverse. *Pronotum* (Text-fig. 36) with anterior border sinuate, anterior angles directed obliquely backward ; hind margin with a raised posterior border in front of scutellum ; setae in lateral borders slightly longer than basal anterior tarsal segment ; surface set with irregularly spaced, transversely crescentic punctures, frequently separated by more than their own transverse diameter on disc, more closely set laterally, narrowly scabrose along anterior margin ; each puncture bearing a minute seta ; intervals finely shagreened and with scattered minute punctures as well ; transverse, impunctate, subbasal areas narrow. Scutellum slightly broader than long, closely punctate laterally, setae in punctures as on pronotum ; median area impunctate. *Elytra* with punctures separated by somewhat more than their own diameter, feebly asperose and bearing minute setae ; lateral borders with stiff, outstanding setae from bases to apicosutural angles, setae very small along apical fourth of elytra ; intervals between coarse elytral punctures almost smooth. Pygidium quadrate to elongate, much more strongly convex at apex than elsewhere ; surface irregularly punctured, punctures often faintly marked, usually separated by more than their own diameter and each bearing a minute seta ; intervals finely shagreened. Metasternum, episterna and hind coxae set with non-squamiform setae, longest along anterior metasternal margin ; punctures usually separated by their own diameter or more ; intervals finely shagreened, more obviously so on episterna and hind coxae. Abdominal segments sparsely punctured, especially medially, some punctures bearing long, outstanding setae, others equipped with short, subrecumbent hairs ; intervals with fine shagreening laterally, becoming obsolete toward midline. *Legs* with anterior tibiae strongly tridentate externally ; basal hind tarsal segment somewhat shorter than second (6 : 7) ; upper ramus of anterior tarsal claws shorter and finer than lower, upper ramus of middle and hind claws longer than lower.

Genitalia (Text-Figs. 65 and 66).

FEMALE. Has the upper ramus of the anterior tarsal claws longer than the lower and the pygidium is evenly and rather shallowly convex and bears a shallow,

elongate fovea on each side near the apex. The lamellae of the antennal club are shorter in the *female* than in the *male*.

Type locality: Péringuey gives the following localities as the habitat range of this species: Cape Province: Kimberley. Orange Free State: Bothaville. Transvaal: Rustenburg; Lydenburg. Southern Rhodesia: Bulawayo; Salisbury.

Material examined from: Cape Province: Kimberley. Transvaal: Sabie Ridge; Potchefstroom (F.); Johannesburg (F.). S-W. Africa: Hoffnung; Abachaus, Otjiwarongo dist. (B.S.S.). Bechuanaland: Gaberones (F.); Francistown (F.); Ngami (F.). S. Rhodesia: Salisbury; Umtali; Lomagundi (D.A.S.R.); Maduke-Manguendi (D.A.S.R.).

The misinterpretation of *S. affinis* Boheman by Péringuey is treated on page 207 of the present work.

Total material seen: 52 examples.

S. infantilis Pér.

Schizonycha infantilis Péringuey, 1904, p. 207.

Length 10-11 mm. Breadth 5 mm.

MALE

Derm pale testaceous with head and pronotum somewhat darker. *Head* with labral emargination very strongly obtuse; anterior clypeal face vertically plane, its row of setiferous punctures entire; clypeal carina biarcuate, feebly raised; fronto-clypeal suture overlain by clypeal carina; transverse carina across vertex sharp, somewhat depressed medially; clypeal and frontal punctures discrete, those of frons sometimes transverse. *Pronotum* similar in outline to that of *S. feirana* (p. 99), but with impunctate, subbasal areas smaller and with intervals between coarse punctures finely shagreened but without micropunctures. *Elytra* with punctures separated by slightly less than their diameter, bearing minute, scarcely squamiform setae; intervals between coarse punctures slightly roughened or very faintly shagreened; lateral borders with stiff, outstanding setae for basal three fourths, setae becoming progressively shorter toward apices. *Pygidium* quadrate to transverse; variably punctate, sometimes very closely punctured; intervals sometimes less than one diameter and finely shagreened; punctures bearing minute, scarcely squamiform setae. *Metasternum*, *episterna* and hind coxae with long, rather sparsely arranged setae in punctures and sometimes with a few, shorter setae on epimera; intervals faintly shagreened toward lateral margins. *Abdominal segments* with punctures separated by more than one diameter, bearing short setae medially and shorter, appressed setae laterally; intervals finely shagreened. *Legs* with anterior tibiae strongly tridentate, first and second teeth very long; basal hind tarsal segment a little shorter than second; tarsal claws with upper ramus distinctly longer than lower.

Genitalia (Text-figs. 69 and 70).

FEMALE. Uncertain, probably very similar to *male*.

Type locality : Salisbury, S. Rhodesia (S.A.M.).

Other material examined from : Transvaal : Pretoria (Div. Ent.). Natal : Pienaars River ; Weenen. S. Rhodesia : Salisbury (B.M. (N.H.), B.S.S. and D.A.S.R.) ; Umtali ; " South of Bulawayo " ; Victoria Falls ; Mtoko ; Lomagundi (D.A.S.R.) ; Virginia Estate (D.A.S.R.).

Also : " Narygas " and " Cape Rawstone " (S.A.M.)

Total material seen : 24 examples.

S. disputabilis Pér.

Schizonycha disputabilis Péringuey, 1904, p. 209.

Length 9 mm. Breadth 4.5 mm.

MALE

This species is very closely related to *S. parilis* Per. (p. 105), differing from it principally in the respect referred to in the key to species. Also the pronotum of *parilis* is usually more closely punctate and the pygidium is relatively larger and slightly more strongly curved horizontally.

Genitalia (Text-fig. 71).

FEMALE. Unknown.

Type locality : Middle Limpopo, S. Rhodesia (S.A.M.).

Other material examined from : S-W. Africa : Grootfontein (S.A.M.).

Total material seen : 2 examples.

S. parilis Pér.

Schizonycha parilis Péringuey, 1904, p. 208.

Length 10.5-11 mm. Breadth 5-5.25 mm.

MALE

Testaceous. *Head* with labral emargination strongly obtuse ; anterior clypeal face vertically plane, with an uninterrupted row of setiferous punctures along it ; clypeal carina slightly bisinuate ; frontoclypeal suture not strongly marked ; transverse carina on vertex clearly marked, forwardly arcuate medially when viewed from above ; clypeal punctures elongate ; frontal punctures more or less irregular in outline. *Pronotum* with anterior border strongly sinuate laterally, directed obliquely backward to anterior angles ; posterior margin with a distinct raised hind border in front of scutellum ; lateral borders with outstanding setae as long as basal anterior tarsal segment ; surface with indistinctly marked transverse, subbasal impunctate areas ; disc set with transverse punctures each containing an M-shaped groove and bearing a minute seta ; punctures on disc separated by more or less their own diameter, more closely set toward anterior margin ; intervals between punctures finely shagreened. Scutellum transverse ; laterally punctate ; intervals

finely shagreened. *Elytra* with punctures separated by their own diameter on disc, each bearing a minute seta similar to those in pronotal punctures; intervals between punctures finely and rather irregularly sculptured; lateral borders set with stiff, outstanding setae from bases to apicosutural angles, setae becoming shorter toward apices. Pygidium transverse; shallowly convex; punctures separated by about their own diameter or less toward lateral margins, less closely set toward midline, leaving an almost impunctate, longitudinal median space; punctures bearing minute setae similar to those of elytra; intervals finely shagreened. Metasternum, episterna and hind coxae sparsely setose, setae on metasternum longer than those elsewhere; intervals between punctures smooth. Abdominal segments with punctures more closely set and somewhat asperose toward lateral margins; punctures bearing recumbent or appressed setae of varying lengths; intervals very finely and faintly shagreened; last abdominal segment feebly convex longitudinally. *Legs* with anterior tibiae tridentate, basal tooth clearly indicated although less prominent than median tooth; basal hind segment about five eighths as long as second; tarsal claws with upper ramus distinctly longer than and as broad at base as lower ramus.

Genitalia (Text-figs. 72 and 73).

FEMALE: almost indistinguishable from the *male* except for the clypeus which is semicircular in outline and not flattened medially as it is in the *male*.

Type locality: Enkeldoorn, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Marandellas; Salisbury. Transvaal: Middelfontein, nr. Nylstroom.

Total material seen: 15 examples.

S. divulsa Pér.

Schizonycha divulsa Péringuey, 1904, p. 249.

11.5–12 mm. Breadth 5.5 mm.

MALE

Derm testaceous with head and pronotum slightly darker. *Head* with labral emargination very slightly acute; anterior clypeal face slightly reflexed medially, almost plane vertically, gap in its row of setiferous punctures broad, sometimes partly bridged by non-setiferous punctures; clypeal carina arcuate, somewhat flattened medially; frontoclypeal suture clearly visible; basal cephalic carina fine; clypeal punctures with internal margins raised; frontal punctures with anterior margins tuberculate. *Pronotum* with anterior border strongly sinuate, anterior angles directed obliquely backward; posterior margin with an entire raised hind border; posterior angles very briefly rounded; lateral borders set with setae distinctly shorter than basal anterior tarsal segment; subbasal, transverse, impunctate areas clearly marked; discal punctures scattered, containing Ω - or M -shaped grooves and bearing pointed, slightly squamiform setae about twice as long as diameter of punctures; punctures scabrose anteriorly and anterolaterally; intervals finely shagreened. Scutellum transverse to quadrate; punctate laterally

and apically, punctures almost annulate, bearing setae as on pronotum; intervals finely shagreened. *Elytra* with punctures separated by slightly less than one diameter, bearing narrow, slightly squamiform setae a little longer than diameter of punctures; intervals between punctures finely shagreened; lateral borders with stiff, outstanding setae from bases to apical margins, becoming more sparsely arranged toward apices. Pygidium slightly transverse, strongly convex; annulate-punctate, separation of punctures usually by more than one diameter, especially apically, punctures bearing short, outstanding setae; intervals finely shagreened. Metasternum, episterna and hind coxae with setae or squamae in punctures, squamae much larger than those of upper surfaces; episterna (except for anterior margin) and hind coxae almost entirely set with squamae; metasternum with fine setae anteriorly, with large squamiform setae elsewhere. Abdominal segments, except for a narrow, longitudinal median area, setoso-punctate, most setae squamiform and more than twice as long as the diameter of their punctures; intervals finely shagreened. *Legs* with anterior tibiae showing only a faintly marked third, basal external tooth; basal hind tarsal segment two thirds as long as second; tarsal claws with upper ramus about half as broad at base as lower and somewhat shorter.

Genitalia (Text-figs. 74 and 75).

FEMALE. Unknown.

Type locality: Rustenburg, Transvaal (S.A.M.).

Other material examined from: Transvaal: Barberton. Péringuey gives Sebakwe, S. Rhodesia, as a locality for this species.

Total material seen: 2 examples.

S. squamosetosa Moser

Schizonycha squamosetosa Moser, 1921, p. 61.

Length 10.5–11.5 mm. Breadth 5–5.5 mm.

MALE

Derm testaceous. *Head* with labral emargination acute; anterior clypeal face reflexed medially, gap in its row of setiferous punctures rather narrow; clypeal carina strongly arcuate; frontoclypeal suture as in *S. matabelana* Pér. (p. 163); basal cephalic carina sharp, clearly marked; clypeal punctures elongate, internal margins sharply impressed; frontal punctures with their anterior borders tuberculate, less strongly so than in *S. matabelana*. *Pronotum* with anterior border strongly sinuate, sloping obliquely backward toward anterior angles; posterior margin with an entire raised hind border; serrate lateral borders set with setae a little shorter than basal anterior tarsal segment; impunctate, transverse, subbasal areas well marked; discal punctures shallow, containing Ω -shaped grooves, bearing narrow, squamiform setae about twice as long as the diameter of a puncture; pronotal punctures progressively more tuberculate toward anterior margin; intervals smooth. Scutellum almost equilateral; lateral margins annulate-punctate, punctures with setae as on pronotum; intervals finely and faintly shagreened. *Elytra* with

punctures separated by about their own diameter, bearing squamiform setae similar to those of pronotum; intervals almost smooth; lateral borders set with setae of varying length, some near shoulders very long. Pygidium transverse; strongly convex vertically, flat mediobasally, strongly rounded laterally; annulate-punctate, punctures separated by more or less one diameter on disc, often by less toward basilateral angles, punctures bearing short, outstanding, slightly squamiform setae for basal two thirds, setae elsewhere longer, non-squamiform; intervals finely shagreened. Metasternum, episterna and hind coxae with squamiform setae in punctures much larger than those of upper surfaces, replaced in some instances on anterior parts of metasternum by testaceous, non-squamiform setae. Abdominal segments setoso-punctate, punctures separated by more than one diameter as a rule, even laterally; setae in punctures becoming more markedly squamiform toward lateral margins; intervals finely but faintly shagreened. Legs with anterior tibiae having at most a feebly indicated third external tooth; basal hind tarsal segment three fifths as long as second; tarsal claws with upper ramus about half as broad at base as lower and distinctly shorter.

Genitalia (Text-figs. 76 and 77).

FEMALE. Similar to *male* but the antennal club is relatively shorter, the pygidium is concave mediobasally and the basal hind tarsal segment is five sixths as long as the second segment.

Type locality: S. Africa (Dr. Penther) (Z.M.B.).

Other material examined: A single *female* with the same data as the holotype. (Z.M.B.) and S. Rhodesia: Marandellas (D.A.S.R.).

Total material seen: 3 examples.

Note: The genitalia of the type, presumably dissected by Moser, are unusual, being relatively much larger than normal and much darker than might be expected in a pale specimen; also they are very different from any other known south African species.

S. inops Pér. (Text-fig. 49)

Schizonycha inops Péringuey, 1904, p. 250.

Length 11-13 mm. Breadth 5-6 mm.

MALE

This species is extremely closely related to *S. squamosetosa* Moser (p. 107), differing from it as explained in the key to species.

Genitalia (Text-figs. 78 and 79).

FEMALE. Differs from the *male* by being broader, having the length ratio of the apical spurs of the hind tibiae less than 2:1, by the shorter lamellae of the antennal club and by the upper and lower ramus of all the tarsal claws being relatively shorter.

Type Locality: Omuramba-Uamatako, Ovamboland (S.A.M.).

Other material examined from: Bechuanaland: Gaberones (F.). S. Rhodesia: Sebakwe (S.A.M.).

Total material seen: 6 examples.

S. increta Pér.

Schizonycha increta Péringuey, 1904, p. 248.

Length 12–13.25 mm. Breadth 6–7 mm. (After Péringuey.)

MALE

Derm testaceous with head and pronotum castaneous. *Head* with labral emargination acute; anterior clypeal face vertically convex, gap in its row of setiferous punctures moderate; clypeal carina straight medially, almost overlying fronto-clypeal suture, angled and running obliquely backward laterally; basal cephalic carina well marked, with a row of small, white setae arising from immediately behind it; clypeal punctures elongate, bearing small, white setae, more conspicuous laterally; frontal punctures slightly asperose, their antero-internal borders feebly raised, bearing larger squamiform setae than clypeal punctures. *Pronotum* (Text-fig. 32) with anterior border feebly sinuate laterally; hind margin with an entire raised posterior border; lateral borders set with setae a little shorter than basal anterior tarsal segment; surface with prominent, transverse, subbasal impunctate areas; disc with variably spaced, almost annulate punctures, asperose along anterior and lateral margins; punctures bearing white, squamiform, pointed setae, larger than those of frons and becoming even larger toward lateral margins; intervals between punctures finely and very faintly shagreened. *Scutellum* slightly transverse; closely punctate, punctures bearing setae similar to those of pronotum; intervals finely and faintly shagreened. *Elytra*, with punctures separated by almost smooth intervals of more or less one diameter and bearing setae similar to those on pronotal disc; lateral borders with stiff, outstanding setae from bases almost to apicosutural angles, setae long from bases to level of hind coxae, much shorter thence to apical borders. *Pygidium* slightly transverse; feebly convex; punctures variably spaced, closer basally, bearing setae similar to those of elytral disc, but often a little narrower; intervals finely shagreened. *Metasternum*, *episterna* and hind coxae with punctures bearing either long, yellowish hairs or larger, squamiform setae obviously larger than those on elytra; squamae largely confined to episterna, lateral metasternal areas and extreme lateral margins of hind coxae. *Abdominal segments* progressively more closely punctate toward lateral borders; setae in punctures broader and more squamiform toward lateral borders; intervals almost smooth except along lateral margins. *Legs* with anterior tibiae bidentate; basal hind tarsal segment four fifths as long as the one following; upper ramus of all tarsal claws shorter and more slender than lower, claws shallowly cleft.

Genitalia (Text-fig. 80). (After Péringuey.)

FEMALE. Very similar to *male* but with the lamellae of the antennal club shorter, the basal segment of the hind tarsi as long as the second and the apical abdominal segment strongly convex laterally where it embraces the lateral borders of the pygidium.

Type locality: Péringuey gives Lourenço-Marques and Beira as localities for this species. The example sent to me and labelled as "Type" in Péringuey's hand is labelled "Delagoa Bay". (= Lourenço-Marques) (S.A.M.).

Other material examined from : Port E. Africa : Zandemela (S.A.M.).

Total material seen : 3 examples.

The type specimen referred to above is a *male*, but no longer has any genitalia. They were presumably removed by Péringuey to have them illustrated. Text-fig. 80 in this paper is a copy of the illustration labelled by Péringuey as being of the *male* genitalia of *S. increta*. I have recently received material from Portuguese East Africa, externally indistinguishable from Péringuey's type specimen, but which has *male* genitalia so different from the illustration given by Péringuey that I hesitate to name it as *S. increta* without reserve. It may be that two species are involved, but as there is no external evidence to support this view, I have provisionally assigned the material to Péringuey's species and reproduce a drawing of the genitalia of the new material, face view and profile, next to the copy of the genitalia illustrated by Péringuey. (Text-figs. 81 and 82.)

The data attached to the new material is as follows : 1 *male* Lourenço-Marques Oct. 1956 (A. J. Barbosa). 1 *female* Matola Dec. 1954 (A. J. Barbosa).

Matola is in the north of Portuguese East Africa and would seem to indicate that *S. increta* may well be an East African species that is sometimes found south of the Zambesi.

S. gracilis Brske.

Schizonycha gracilis Brenske, 1898, p. 368.

Schizonycha gracilis Brske., Moser, 1918, p. 241.

Schizonycha microps Brenske, 1898, p. 376 (**syn. nov.**).

Schizonycha paupercula Péringuey, 1904, p. 235 (**syn. nov.**).

Schizonycha paupercula Pér., Burgeon, 1946, p. 253.

Schizonycha imparilis Moser, 1914, p. 266.

Schizonycha imparilis Moser, 1918, p. 241.

Length 11-12.5 mm. (Burgeon 8-10 mm.). Breadth 5-5.5 mm.

MALE

Derm pale testaceous. *Head* with labral emargination rightangled or very slightly acute ; anterior clypeal face not usually convex vertically, with or without a narrow median gap in its row of setiferous punctures ; anterior edge of clypeus more or less straight medially, oblique laterally ; clypeal carina weakly arcuate, but distinct from frontoclypeal suture ; vertex without a transverse carina ; clypeal punctures close-set, but shallow, their antero-internal borders only being sharply formed ; frontal punctures asperose ; clypeal and frontal punctures bearing small, white, narrowly squamiform setae ; head between eyes strongly narrowed from frontoclypeal suture to vertex. *Pronotum* with anterior border strongly sinuate, anterior angles oblique ; posterior margin with an entire raised hind border between obtuse hind angles ; lateral borders with outstanding setae shorter than basal anterior tarsal segment, less closely and less deeply crenulate along anterior halves than elsewhere ; surface with transverse, subbasal impunctate areas sometimes narrower and more widely separated than usual ; disc with slightly asperose, crescentic punctures usually separated by at least their own diameter ; punctures more strongly

asperose along anterior margin; all punctures bearing white, squamiform setae, those on disc similar to frontal setae, those along lateral margins and sometimes those along anterior margin broader and more conspicuous; intervals between coarse punctures finely shagreened. Scutellum slightly transverse (20:25); set with more or less circular punctures separated by from less than one to about two diameters; punctures bearing small, white, squamiform setae similar in size to those of elytra; intervals finely shagreened. *Elytra* with punctures separated by less than their diameter as a rule, bearing small, squamiform setae usually a little more conspicuous than those of pronotal disc; intervals finely shagreened; lateral borders with stiff, outstanding setae confined to between bases and level of hind coxae, often not extending backward as far as hind border of metasternum, setae behind this point very small, becoming very sparse behind level of third abdominal segment. Pygidium transverse (7:11); closely annulate-punctate, punctures separated by much less than their diameter, bearing broader setae than those of elytra; intervals almost smooth. Metasternum, episterna and hind coxae with almost all punctures bearing short, broad, appressed squamae, much broader than those of upper surfaces; a few fine, outstanding setae present on anterior parts of metasternum and a few short, subrecumbent, pale testaceous setae along its midline. Abdominal segments with closely-set, appressed squamae similarly shaped, but a little smaller than those of hind coxae, less closely set medially. *Legs* having the anterior tibiae with the third external tooth very feebly developed in some examples; basal hind tarsal segment less than half as long as second; tarsal claws not deeply cleft, with upper ramus about one third as broad as lower and shorter.

Genitalia (Text-figs. 83 and 84).

FEMALE. The antennal club has shorter lamellae than that of the *male*, but in all other respects the two sexes are very similar.

Type locality: Dar es Salaam, Tanganyika T. (Z.M.B.).

Other material examined from: S. Rhodesia: Salisbury; Sebakwe (S.A.M.).

Tanganyika T.: Dar es Salaam (Z.M.B.); Lindi (Z.M.B.)—type of *S. microps* Brske.

Burgeon (1946) gives Elisabethville and Ngaye, both in south-east Belgian Congo as localities for this species.

Total material seen: 9 examples.

The synonymy given above is based upon a personal examination of the holotypes of *S. paupercula*, *S. microps* and *S. gracilis*. Moser (1918) recorded the synonymy of his own species and *S. gracilis* Brenske.

S. frontalis Moser

Schizonycha frontalis Moser, 1921, p. 60.

Length 15–16 mm. Breadth 8 mm.

MALE

Derm brunneotestaceous with head and pronotum somewhat darker. *Head* with labral emargination almost rightangled; anterior face of clypeus reflexed, vertically

convex, gap in its row of setiferous punctures moderate; clypeal carina feebly arcuate, overlying frontoclypeal suture except for median third; basal cephalic carina roughly marked, with a row of close-set, backwardly directed, squamiform setae immediately behind it; clypeal punctures sparse, elongate, internal margins sharp; frontal punctures more or less confined to anterolateral areas, slightly scabrose, bearing conspicuous, white, pointed, squamiform setae; clypeal punctures near lateral margins bearing setae slightly smaller than those of frons. *Pronotum* with anterior border slightly sinuate; posterior margin with an entire raised hind border; posterior angles slightly obtuse; lateral borders set with setae at least as long as basal anterior tarsal segment; disc without transverse, impunctate, subbasal areas; discal punctures each containing a $\cap$ -shaped groove and bearing a conspicuous, white, pointed, squamiform seta, broader than on frons; punctures variably separated, often by less than one diameter, somewhat scabrose along anterior margin; intervals finely shagreened. Scutellum slightly transverse; closely punctate except for apex and mediobasal area; punctures as on pronotum, bearing similar setae; intervals finely shagreened. *Elytra* with punctures separated by slightly less than their own diameter, bearing setae as on scutellum; intervals almost smooth; lateral borders with long, outstanding setae near shoulders, with shorter, curved setae thence to apical borders which are set with even smaller, somewhat squamiform setae. Pygidium very slightly transverse, strongly convex; punctures for the most part separated by from one to two diameters, bearing outstanding, squamiform setae, narrower than on elytra but about as long, apical area more sparsely punctured, punctures here bearing long, outstanding, testaceous setae twice as long or more than setae elsewhere on pygidium; intervals finely shagreened. Metasternum, episterna and hind coxae with most punctures bearing long, fine, yellow setae, large squamiform setae present laterally, particularly on episterna. Abdominal segments almost impunctate medially, punctures numerous laterally, but usually separated by more than one diameter, some bearing long, yellow setae, others large, squamiform setae similar to those on metasternal epimera; intervals finely shagreened, more faintly so toward midline. *Legs* with anterior tibiae having only a very faint indication of a third external tooth; basal hind tarsal segment almost as long as second; upper ramus of tarsal claws about half as broad at base as lower and slightly shorter.

Genitalia (Text-figs. 85 and 86).

FEMALE. Extremely like the *male* but distinguishable by its less convex and less transverse pygidium and by the shorter lamellae of the antennal club.

Type locality: Natal (Z.M.B.).

Other material examined from: Natal: "Zulu" (N.H.R.M.); Mkuzi, Zululand (B.M. (N.H.) and Div. Ent.).

Both the example cited here as the type and the specimen recorded above as from "Zulu" where seen by Moser when he described the species. The Stockholm specimen is a *male* and bears a label "*Schizonycha frontalis* n. sp." together with a "TYPUS" label affixed by the Naturhistoriska Riksmuseum authorities. The *female* example in the Zoologisches Museum, Berlin, bears a label reading "*Schizonycha frontalis* Mos. type ♀" in Moser's handwriting and also has a "Type" label

affixed by the museum authorities. The *male* specimen in Stockholm has had the genitalia extracted and mounted separately. These are deposited in the Zoologisches Museum, Berlin.

In his original description, Moser gave no indication of the sex of his material and did not select a holotype; it does not seem to have been his habit. All that one can say is that he gave both Natal and "Zulu" as localities, showing that he had seen both the specimens referred to above.

As this species is an unusual one and unlikely to be confused with any other, I do not feel hesitant about accepting the *female* labelled as "type ♀" by Moser as the holotype of *S. frontalis*. The *male* example must therefore be regarded as a paratype.

S. confinis Pér.

Schizonycha confinis Péringuey, 1904, p. 249.

Length 14.5 mm. Breadth 7 mm.

MALE

Derm pale to medium testaceous. *Head* with labral emargination almost rectangular; anterior clypeal face vertically convex, with a moderately broad gap in its row of setiferous punctures; clypeal carina biarcuate, overlying frontoclypeal suture; transverse carina across vertex not clearly marked; clypeal punctures sparse, slightly elongate; frontal punctures closely set, strongly asperose, bearing large, squamiform setae. *Pronotum* with anterior border slightly sinuate toward anterior angles; posterior angles very briefly rounded; posterior margin with an uninterrupted hind border between hind angles; crenulate lateral borders with outstanding setae at least slightly shorter than basal anterior tarsal segment; surface without transverse, subbasal impunctate areas; disc with punctures separated by from one to two diameters, each containing a $\cap$ -shaped groove and having the anterior border slightly tuberculate; punctures bearing squamiform setae similar to those of frons; punctures more strongly tuberculate toward anterior margin of pronotum; intervals between punctures finely shagreened. Scutellum transverse (2:3); closely setoso-punctured, setae as on pronotum; intervals finely shagreened. *Elytra* with punctures separated by their own diameter and bearing squamiform setae as on pronotum; intervals finely, but very faintly shagreened; lateral borders with long, outstanding setae for basal two thirds. Pygidium slightly transverse; closely punctate, punctures usually separated by less than their diameter and bearing squamiform setae similar to those of pronotum, except along apical margin where the setae are longer, outstanding and non-squamiform. Metasternum, episterna and hind coxae setoso-punctate; anterior parts of metasternum bearing long, outstanding setae, setae elsewhere shorter, squamiform, those of metasternum and episterna being a little larger than those of hind coxae and elytra; intervals finely and faintly shagreened. Abdominal segments closely punctate medially as well as laterally, punctures bearing conspicuous setae, narrower, though still squamiform toward midline; intervals finely shagreened. *Legs* with anterior tibiae

bidentate externally; basal hind tarsal segment two thirds as long as second; upper ramus of all tarsal claws slightly shorter and distinctly narrower than lower.

Genitalia (Text-fig. 90).

FEMALE. Unknown.

Type locality: Sebakwe, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Bent.

Total material seen: 2 examples.

S. peringueyi Dalla Torre

Schizonycha peringueyi Dalle Torre, 1912, p. 156.

Schizonycha vicaria Péringuey (*nec* Kolbe), 1904, p. 251.

Length 15.5 mm. Breadth 8 mm.

MALE

This species is very closely related to *S. nigricornis* Burm. (p. 114) but is larger. It differs from the latter as described in the key and also as follows: the pronotal punctures have more irregularly raised edges and the transverse, impunctate areas of the pronotum are much more clearly marked, almost meeting medially. The scutellum is equilateral and has a longitudinal median sulcus in the type specimen. The basal hind tarsal segment is distinctly shorter than the second and the genitalia (Text-fig. 87) differ.

FEMALE. Unknown.

Type locality: Namaqualand (S.A.M.).

The type specimen is the sole example known to me.

S. nigricornis Burm.

Schizonycha nigricornis Burmeister, 1855, p. 272.

Schizonycha nigricornis Burm., Péringuey, 1904, p. 250.

Length 11.5–13 mm. Breadth 6–7 mm.

MALE

Colour piceous black, feebly shining. *Head* with labral emargination slightly obtuse; anterior clypeal face feebly convex vertically, with a narrow median gap in its row of setiferous punctures; clypeal carina arcuate; frontoclypeal suture clearly visible; vertex with a rather irregularly marked transverse carina which has a groove immediately behind it; clypeal punctures with their internal borders sharply marked; frontal punctures with their anterior borders sharply impressed; clypeal and frontal punctures bearing small, white, squamiform setae. *Pronotum* strongly narrowed from about middle to slightly sinuate anterior border; anterior angles forwardly directed; posterior angles rightangled; posterior margin not or very faintly bordered in front of scutellum; crenulate lateral borders set with outstanding setae shorter than basal anterior tarsal segment; surface with trans-

verse, subbasal impunctate areas usually present, but not always clearly marked; disc sometimes with a longitudinal median impunctate space; elsewhere set with circular punctures, frequently separated by more than one diameter on disc; punctures bearing elliptical, squamiform setae; intervals finely shagreened. Scutellum transverse; punctures confined to lateral margins, similar to those of pronotal disc and bearing similar setae; intervals finely shagreened. *Elytra* with punctures separated by one diameter or a little less, bearing slightly broader squamiform setae than those of pronotum; intervals between punctures finely, but more strongly shagreened than pronotal intervals; lateral borders with short, outstanding setae from bases to apical borders, setae becoming shorter and interspersed with small, squamiform setae toward apices. Pygidium transverse; surface wrinkled, sparsely annulate-punctate, almost impunctate for apical third; punctures bearing squamiform setae somewhat smaller than those of elytra; intervals finely shagreened. Metasternum, episterna and hind coxae set with punctures bearing for the most part broad, squamiform setae larger than those on upper surfaces; setae on anterior margins of metasternum and episterna and near median ends of hind coxae testaceous, non-squamiform; intervals between punctures finely shagreened. Abdominal segments closely punctured, especially laterally, each with a small tubercle on the anterointernal border; punctures toward lateral margins bearing broad, squamiform setae, setae in punctures toward midline smaller and less conspicuous; intervals finely shagreened. *Legs* with anterior tibiae having at most a trace of a third (basal) external tooth, the apical and second teeth being closer together than usual (Text-fig. 41); basal hind tarsal segment slightly shorter than second segment (10:13); tarsal claws with upper ramus very much more slender than and a little more than half as long as lower.

Genitalia (Text-figs. 88 and 89).

FEMALE. Unknown.

Type locality: S. Africa (Coll. Ecklon) (Univ. Halle).

Other material examined from: Cape Prov.: Katberg, "Cap b. spei" (B.M. (N.H.), B.S.S. and F.). "S. Africa" (no more exact locality).

Total material seen: 14 examples.

Through the kindness of the authorities of the University at Halle, I have been allowed to examine the material in the Burmeister collection over the name *S. nigricornis*. This material consists of two *male* specimens with the data "Pr. b. sp.". Both are examples of the species interpreted by Péringuey as *S. nigricornis*, both agree with the description of the species given by Burmeister and there is no reason why they should not be part at least of the original material described by Burmeister. I hereby select one of them, to which I have attached a suitable label, as the lecto-type of *Schizonycha nigricornis* Burmeister.

S. algoensis Pér.

Schizonycha algoensis Péringuey, 1904, p. 199.

Schizonycha algoa Péringuey, 1904, p. 240 (erratum).

Length 14.5 mm. Breadth 7.5 mm.

MALE

Derm very dark brown. *Head* with angle formed by labral emargination about 110° ; anterior clypeal face vertically convex, reflexed, with a broad median gap in its row of setiferous punctures; clypeal carina angulate medially; frontoclypeal suture indistinct; clypeus sparsely set with slightly elongate punctures; frons irregularly punctured but punctures not scabrose; vertex with a well marked transverse carina. *Pronotum* with anterior border not very strongly sinuate laterally, obtuse anterior angles directed obliquely forward; rightangled posterior angles sharply formed; posterior margin with a raised hind border in front of scutellum; lateral borders with outstanding setae as long as basal anterior tarsal segment; surface with transverse, subbasal impunctate areas and a small impunctate median area as well; elsewhere with large closely-set punctures each containing an inverted U-shaped groove and bearing a conspicuous squamiform seta; intervals almost smooth. Scutellum almost equilateral, sides rounded; disc with a few, coarse squamiferous punctures; intervals finely shagreened. *Elytra* with punctures usually separated by less than one diameter, bearing squamiform setae slightly smaller than those of pronotum; intervals between punctures slightly roughened; lateral borders set with outstanding setae from bases to apical borders. Pygidium transverse; set with punctures separated by rather more than one diameter and equipped with short, outstanding, slightly squamiform setae; intervals faintly roughened. Metasternum, episterna and hind coxae with punctures separated by about one diameter, punctures bearing long setae. Abdominal segments with closely set punctures laterally, punctures bearing squamiform setae; segments with a few setiferous punctures toward midline; intervals between punctures toward and along lateral margins finely shagreened. *Legs* with anterior tibiae tridentate although with basal tooth much less strongly produced than middle tooth; basal hind tarsal segment about as long as second; tarsal claws with upper ramus slightly longer than lower and as broad at base.

Genitalia (Text-fig. 91).

FEMALE. Unknown.

Type locality: Delagoa Bay (S.A.M.).

Other material examined from: Port E. Africa: Delagoa Bay (S.A.M.).

Total material seen: 2 examples.

In his key to the south African species of *Schizonycha*, Péringuey named this species *algoensis*. Later, when he came to describe the species, he altered the name to *alga*. The illustration of its *male* genitalia again uses the name *algoensis*. Using my privilege as first reviser and assuming that the species was defined by its inclusion in the key, I am adopting the more appropriately formed *algoensis* as the name for this species.

S. infarsa Pér.

Schizonycha infarsa Péringuey, 1904, p. 228.

Length 17 mm. Breadth 10 mm.

FEMALE

Apterous. Colour dark castaneous. *Head* with labral emargination acute ; anterior clypeal face vertically plane, reflexed, without a median gap in its row of setiferous punctures ; clypeal carina strongly arcuate ; frontoclypeal suture well marked, backwardly angled medially ; vertex with a rather irregularly raised transverse ridge ; clypeal punctures elongate ; frontal punctures transverse, their anterior borders sharply formed. *Pronotum* with anterior border evenly emarginate ; anterior angles sharp, obtuse ; posterior angles almost rightangled ; hind margin with a raised posterior border in front of scutellum ; crenulate lateral borders set with outstanding setae almost or quite as long as basal anterior tarsal segment ; surface with transverse, subbasal impunctate areas not completely without punctures ; disc with punctures which are either annulate or which contain an inverted, U-shaped groove and which bear inconspicuous, non-squamiform setae ; punctures frequently separated by much more than one diameter ; intervals smooth. Scutellum transverse (1 : 2) ; laterally punctate only ; punctures circular and of varying sizes ; intervals smooth. *Elytra* set with punctures of varying density, often separated by more than one diameter, especially apicolaterally, in other areas separation may be by less than one diameter ; punctures bearing inconspicuous setae as on pronotum ; lateral borders set with outstanding setae from bases to level of hind margin of second abdominal segment, glabrous thence to apicosutural angles. Pygidium slightly transverse ; coarsely and closely punctured, punctures separated by from one half to one diameter except on and almost impunctate basal area ; punctures annulate and bearing small, inconspicuous, non-squamiform setae ; intervals finely and rather faintly shagreened. Metasternum, episterna and hind coxae set with setiferous or squamiferous punctures, the latter more especially laterally ; intervals faintly roughened. Abdominal segments impunctate medially except for a single transverse row of setiferous punctures on each ; pluripunctate laterally, punctures usually bearing a short seta and tuberculate on their anterior borders ; intervals finely shagreened along extreme lateral margins, progressively less strongly so toward midline where surface is finely wrinkled. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment very slightly shorter than second ; upper ramus of all tarsal claws very slightly shorter than lower.

MALE. Unknown.

Type locality : Lydenburg, Transvaal (S.A.M.).

The *female* type specimen is the only example of this species known to me.

S. fallax (Pér.)

Atys fallax Péringuey, 1904, p. 257.

Atys fallax Pér., Andrae, 1933, p. 105, 106.

Length 11.5–12.5 mm. Breadth 6–7 mm.

MALE

Derm testaceous with head and pronotum more reddish in tone. *Head* with labral emargination slightly acute ; anterior clypeal face broadly reflexed medially,

slightly concave vertically in some examples, usually plane, median gap in its row of setiferous punctures very broad; clypeal carina strongly arcuate medially, almost straight toward lateral borders; frontoclypeal suture backwardly angled medially; vertex without a transverse carina, usually with a band of closely set, small punctures across it; clypeal punctures elongate, their internal borders sharply formed; frontal punctures discrete, slightly irregular in outline, anteromedian area of frons impunctate; frons usually shallowly concave medially. *Pronotum* with anterior border evenly emarginate; posterior margin without a raised hind border in front of scutellum; lateral borders faintly crenulate, set with outstanding setae usually shorter than basal anterior tarsal segment; surface with short, but clearly marked transverse, subbasal impunctate areas; discal punctures circular, variably separated by from one half to about five diameters, each containing an inverted, U-shaped groove and bearing a minute seta, shorter than the diameter of a puncture; punctures elsewhere scarcely closer than on disc, often annulate; intervals smooth. Scutellum almost equilateral, with coarse round punctures apically and laterally; punctures bearing minute, inconspicuous setae; intervals smooth except for a few microscopic punctures. *Elytra* with punctures separated by less than one diameter, bearing minute, inconspicuous setae; intervals almost smooth; lateral borders with outstanding setae usually confined to near shoulders although some may occur toward midline. Pygidium strongly transverse, moderately and evenly convex; sparsely annulate-punctate, separation of punctures usually by more than one diameter; setae of punctures minute; intervals finely shagreened. Metasternum, episterna and hind coxae sparsely punctate; setae short, except on anterior parts of metasternum, sparsely arranged; intervals almost smooth. Abdominal segments sparsely punctate, especially medially; punctures with anterior borders slightly tuberculate, usually bearing short, appressed setae, but in some instances long, outstanding, yellowish setae; intervals very finely and faintly shagreened on disc, more noticeably so toward lateral margins. *Legs* with anterior tibiae tridentate; basal hind tarsal segment half as long as second; upper ramus of all tarsal claws finer and slightly shorter than lower.

Genitalia (Text-figs. 103 and 104).

FEMALE. Unknown.

Type locality: Salisbury, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Salisbury.

Total material seen: 23 examples.

S. villosa Brske. (Text-fig. 50)

Schizonycha villosa Brenske, 1898, p. 367.

Schizonycha villosa Brsk., Péringuey, 1904, p. 227.

Length 13 mm. Breadth 7 mm. (11 × 6 mm.—Péringuey).

MALE

Derm pale testaceous with head and pronotum more reddish in tone. *Head* with labral emargination acute; anterior face of clypeus vertically plane, with an entire

row of setiferous punctures along it ; clypeal carina moderately to strongly arcuate ; frontoclypeal suture backwardly arcuate medially ; vertex with a sharply raised transverse carina ; clypeal punctures elongate, their internal margins sharply formed, bearing minute setae ; frontal punctures slightly asperose, their antero-internal borders being feebly raised, bearing minute setae similar to those of clypeus. *Pronotum* with anterior border evenly emarginate ; posterior margin without a raised hind border in front of scutellum ; lateral borders with outstanding setae considerably longer than basal anterior tarsal segment ; surface without distinct transverse, subbasal, impunctate areas ; punctures on disc each containing an inverted U-shaped groove and bearing a minute, almost white seta ; punctures separated by from one to several diameters ; intervals finely shagreened. Scutellum transverse ; set with slightly asperose punctures, each bearing a seta which is a little more conspicuous than those of pronotum ; intervals finely shagreened ; scutellum normally largely hidden by long, fine, yellow setae protruding from beneath base of pronotum. *Elytra* with punctures separated by from one to two diameters, bearing minute setae similar to those of pronotum ; intervals shining, but not quite smooth ; lateral borders with long, outstanding setae from bases to apical borders, setae diminishing in length toward apical borders. Pygidium strongly transverse ; sparsely and shallowly annulate-punctate, punctures bearing minute, white setae ; intervals very finely and faintly shagreened. Metasternum, episterna and hind coxae with long, fine, densely-set, yellow pubescence. Abdominal segments with conspicuous, sometimes squamiform setae in punctures ; intervals almost smooth medially, finely and very faintly shagreened toward lateral borders. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment about three fifths as long as second ; tarsal claws with upper ramus about as broad at base as lower and almost twice as long.

Genitalia (Text-figs. 92 and 93).

FEMALE. Stated by Péringuey to differ from the *male* in that it has the metasternum, episterna and hind coxae clothed with a few, squamiform setae and in that the basal hind tarsal segment is relatively longer.

Type locality : Natal (Z.M.B.).

Other material examined from : Natal : Frere.

Péringuey gives Maritzburg and Estcourt, Natal as localities for this species.

Total material seen : 3 examples.

S. lebidis n. n.

Schizonycha debilis Péringuey (*nec* Burmeister), 1904, p. 252.

Length 13.5–14.5 mm. Breadth 7.5–8 mm.

MALE

Derm pale testaceous with head and pronotum more reddish. *Head* with labral emargination acute ; anterior clypeal face slightly reflexed, without a median gap in its row of setiferous punctures, vertically plane ; clypeal carina evenly arcuate ;

frontoclypeal suture distinct; basal cephalic carina irregularly raised; clypeal punctures elongate, internal borders sharp; frontal punctures obliquely transverse, their antero-internal borders raised. *Pronotum* with anterior border evenly curved; posterior margin without a raised hind border in front of scutellum; posterior angles rightangled; lateral borders feebly serrate, bearing setae sometimes considerably longer than basal anterior tarsal segment; surface without clearly marked subbasal impunctate areas; discal punctures scattered, strongly transverse, bearing short, inconspicuous setae; punctures along basal margin bearing long, outstanding, testaceous setae; punctures more closely set and slightly scabrose along extreme anterior margin; intervals finely shagreened. Scutellum slightly transverse; punctate laterally; partly covered by long yellow hairs borne by mesonotal punctures; intervals finely shagreened. *Elytra* with punctures variably separated, often by more than one diameter, bearing small, inconspicuous setae; intervals finely shagreened; lateral borders with long, outstanding setae near shoulders, setae short elsewhere. Pygidium transverse; almost impunctate; surface rugulose and finely shagreened. Metasternum, episterna and hind coxae with long, fine, densely set, testaceous to flavous setae. Abdominal segments sparsely punctate, especially medially, punctures with antero-internal borders slightly tuberculate, bearing fine setae of varying lengths; intervals finely shagreened, more strongly so laterally. *Legs* with anterior tibiae tridentate; basal hind tarsal segment half as long as second; upper ramus of tarsal claws one fourth as broad at base as and two thirds as long as lower.

Genitalia (Text-figs. 94 and 95).

FEMALE. Unknown.

Type locality: Transkei, Cape Province is the only locality given by Péringuey.

Material examined from: Transkei (S.A.M.). Transvaal (no exact locality) and "S. Africa".

Total material seen: 5 examples.

S. debilis Burm.

Schizonycha debilis Burmeister, 1855, p. 267.

Schizonycha caffra Péringuey, 1904, p. 247 (*syn. nov.*).

Schizonycha neutra Péringuey, 1904, p. 229 (*syn. nov.*).

Length 15-16 mm. Breadth 7-9 mm.

MALE

Colour testaceous with head and pronotum darker. *Head* with labral emargination acute; anterior clypeal face not, or scarcely convex vertically, gap in row of setiferous punctures brief; anterior clypeal border rounded laterally, truncate medially; clypeal carina arcuate; frontoclypeal suture distinct; frons a little longer in midline than clypeus; basal cephalic carina a sharp angulation, but scarcely raised as a rule; frontal punctures irregular, slightly asperose, bearing small, white, squamiform setae; clypeal punctures shallower and much more sparsely arranged than those of frons, not, or scarcely asperose. *Pronotum* unusually strongly

narrowed to anterior border; anterior border evenly curved; anterior angles strongly obtuse, posterior angles slightly obtuse; lateral borders only slightly convergent from middle to hind angles, shallowly sinuate, setae in lateral borders longer than basal anterior tarsal segment; hind border not raised medially; anterior margin narrowly scabroso-punctate, punctures elsewhere not scabrose, usually separated by more than one diameter, especially toward centre of disc, each with a small, recumbent, squamiform seta, slightly more conspicuous than those on head; a few long, outstanding, testaceous setae present in punctures along hind margin; intervals between punctures finely shagreened. Scutellum equilateral or slightly longer than broad, with a few punctures laterally bearing setae slightly longer than diameter of punctures, intervals finely shagreened. *Elytra* with punctures separated by a little more than their diameter, each with a recumbent, small, white, squamiform seta, similar to those of pronotum; intervals with scarcely discernible shagrenation; lateral borders with outstanding, testaceous setae from bases almost to apical borders, setae usually shorter behind level of hind coxae. Pygidium sparsely punctured, setae in punctures similar to those of elytra, intervals finely shagreened. Metasternum, episterna and hind coxae densely set with long, pale testaceous pubescence. Abdominal segments almost impunctate medially, punctures toward lateral margins usually bearing squamiform setae which are slightly more conspicuous than those of elytra, a few long, testaceous, non-squamiform, suberect setae also present, longer and more conspicuous on penultimate segment; intervals very faintly shagreened toward lateral borders. *Legs* with anterior tibiae tridentate; basal hind tarsal segment shorter than second; tarsal claws of anterior legs with upper ramus much shorter and finer than lower, claws of middle and hind tarsi with lower ramus very much shorter than upper and set almost at rightangles to it.

Genitalia (Text-figs. 96 and 97).

FEMALE. This species shows strongly marked sexual dimorphism. The *female* has much reduced wings, a very short antennal club (in contrast to the unusually long club of the *male* which is longer than the other antennal segments combined), has a slightly more acute labral emargination, slightly more obtuse posterior pronotal angles. It has the lateral pronotal borders set with setae shorter than the basal anterior tarsal segment and has a flatter pygidium. Most of the punctures of the metasternum, episterna and hind coxae bear large, appressed, squamiform setae. The tarsal claws of all the legs have the lower ramus much shorter than the upper and less broad at the base.

Type locality: S. Africa (coll. Ecklon) (Univ. Halle).

Other material examined from: Cape Province: Grahamstown (S.A.M.-Holotypes of *S. caffra* and *S. neutra*); Uitenhage; Brak Kloof Farm; Adelaide. Also "Int. S. Africa" (no more detailed locality) and "S. Africa" (other examples from the type series in the Burmeister collection) (Univ. Halle).

Total material seen: 10 examples.

The Burmeister collection at Halle contains three *male* specimens over the name *S. debilis*. They are all of the same species and agree well with Burmeister's description of *S. debilis*. I have no doubt that they belong to the material used by him in its preparation and I hereby select one of them, which I have suitably labelled,

as the lectotype of *Schizonycha debilis* Burm. Having had the opportunity of examining Péringuey's type specimens of *S. caffra* and *S. neutra*, I have no doubt that they are conspecific with Burmeister's *S. debilis*, despite the fact that *S. neutra* is based upon a *female* example.

Péringuey misinterpreted Burmeister's *S. debilis* and so inadvertently described a hitherto unknown species under that name. This species is re-described and re-named on page 119 of this paper.

THE "RUGOSA" GROUP

As will be obvious from their treatment in the key to species, these form a closely interlinked assembly which exhibit variation in their external characteristics to an extent rendering it almost impossible to construct a satisfactory key for their identification. On the other hand the *male* genitalia seem to show that a number of species is involved and not a widely distributed, highly variable single species. If more material were available it might be possible to deduce more about the validity of the species set out below on the basis of their geographical distribution.

S. rugosa Brske.

Schizonycha rugosa Brenske, 1898, p. 353.

Schizonycha rugosa Brske., Péringuey, 1904, p. 244.

Schizonycha indotata Péringuey, 1904, p. 245 (*syn. nov.*).

Length 15.5-17 mm. 7.7-8.5 mm.

MALE

Colour varying from pale testaceous to very dark brown, head and pronotum in lighter examples usually darker than elytra. *Head* with labral emargination acute; anterior clypeal face vertically plane, median gap in its row of setiferous punctures variable in length, usually moderately broad; clypeal carina usually evenly arcuate; frontoclypeal suture clearly visible; vertex with a feebly raised transverse carina. *Pronotum* with anterior border feebly sinuate laterally; anterior angles obtuse; posterior angles almost rightangled; posterior margin without a raised hind border in front of scutellum; lateral borders with stiff, outstanding setae usually shorter than basal anterior tarsal segment; surface with well marked transverse, subbasal impunctate areas; disc with coarse, variably spaced punctures, often separated by less than one diameter, containing an inverted U-shaped groove and bearing a small, but distinct, white, squamiform seta about as long as the diameter of a puncture; intervals finely shagreened. Scutellum slightly transverse; closely punctate laterally, each puncture containing an inverted U-shaped groove and bearing a seta similar to or slightly smaller than those on pronotum; intervals finely shagreened. *Elytra* with broad punctures, separated in many instances by less than their diameter, bearing small, white, squamiform setae similar to those of pronotal disc; intervals usually with traces of shagreening; lateral borders with stiff, outstanding setae near shoulders, sometimes extending backward to level of

hind coxae or beyond, setae behind this point minute, inconspicuous, recumbent. Pygidium slightly transverse; convex; shallowly and sparsely annulate-punctate, punctures bearing minute setae smaller than those in punctures on elytra; intervals finely shagreened, surface frequently wrinkled. Metasternum, episterna and hind coxae setoso- and squamoso-punctate, squamiform setae more or less confined to posterior half of episterna, posterolateral areas of metasternum and most of hind coxae, variable in extent and number, much larger than any on upper surfaces; setae on other parts of pectus long, fine, suberect, almost white. Abdominal segments annulate-punctate, more closely so laterally; punctures bearing either small, squamiform setae or longer, non-squamiform hairs, the former predominating toward the lateral margins; squamiform setae usually larger than those on elytra, but not as large as those on hind coxae; intervals finely shagreened, very faintly so toward midline. *Legs* with anterior tibiae tridentate, the basal tooth usually feebly marked; basal hind tarsal segment at most two thirds as long as second; tarsal claws with upper ramus slightly less than half as broad at base as lower and distinctly shorter.

Genitalia (Text-fig. 98).

FEMALE. Very like the *male* but the antennal club is composed of distinctly shorter lamellae; although the basal segment of the hind tarsi is almost as short, relative to the second segment, as it is in the *male*, the upper ramus of the tarsal claws is as long as, or even slightly longer than the lower ramus and only a little finer in construction.

Type locality: Natal (Z.M.B.).

Other material examined from: Natal: Weenen; Port Natal; Indaleni; Pietermaritzburg (B.S.S.); unlocalized (B.S.S.). Transvaal: Pietersburg.

Péringuey records Lydenburg, Transvaal and an unlocalized area in S. Rhodesia as localities from which he received *S. indotata*. I have examined the type specimen of *S. indotata* (see below), but it bears no locality label.

Total material seen: 15 examples.

As mentioned above, I have had the opportunity of examining the type specimen of *S. indotata* Pér. I have been able to compare it with the type specimen of *S. rugosa* Brske. and I have no doubt that they are examples of a single species. Péringuey apparently had some doubt as to the validity of *S. indotata* as his type specimen bears a label with the name "*rugosa*" on it.

S. valvata Brske.

Schizonycha valvata Brenske, 1898, p. 353.

Schizonycha valvata Brske., Péringuey, 1904, p. 244.

Length 17.5 mm. Breadth 9 mm.

FEMALE

Colour castaneous with head and pronotum darker.

Péringuey saw the holotype of this species and compared it with his own species *S. noscitata* (p. 125). Through the kindness of Dr. K. Delkeskamp of the Zoologisches

Museum, Berlin, I have seen this specimen also. It is the sole known representative of Brenske's species and is obviously very closely related to both *S. rugosa* and to *S. fatidica* Pér. Indeed it may well be a *female* example of one of these two species. On the other hand the pygidium of *S. valvata* is of an unusual shape, being shallowly concave along the midline, obliquely flattened laterally and impressed toward the basal angles. Also the anterior tibiae are more robust and more obviously tridentate than is usual with either *S. rugosa* or *S. fatidica*.

Until more material becomes available and the identities of the elements of the "*rugosa*" group are better known, I think it best to retain *S. valvata* Brske. as a separate species in view of its characteristic pygidial form. But for this structure and the broader front tibiae, *S. valvata* is almost indistinguishable from a *female* example of *S. rugosa*.

MALE. Unknown.

Type locality : S. Africa (coll. Jekel) (Z.M.B.).

S. fatidica Pér.

Schizonycha fatidica Péringuey, 1904, p. 246.

Length 17-19 mm. Breadth 7.5-9 mm.

MALE

Péringuey differentiates this species from *S. rugosa* (as *S. indotata*) by saying that the clypeus has a sinuate anterior edge, the pronotum has the punctures scabrose along the anterior margin only, those elsewhere being cicatricose. He also refers to an elongate median smooth space on the pronotal disc.

I have examined examples showing the above features which have proved to have genitalia which clearly assigned them to *S. rugosa* Brske. On the other hand it does seem from a series of examples of *S. fatidica* and of *S. rugosa* that the former tends to be a larger and darker species than the latter.

Genitalia (Text-figs. 100 and 101).

Type locality : Grahamstown, Cape Province (S.A.M.).

Other material examined from : Cape Province : Grahamstown ; Port St. John, Pondoland ; "Cap. b. Spei" (B.S.S.). Zululand : Nagana.

Péringuey also records Kowie, Cape Province as a locality for this species.

Total material seen : 10 examples.

S. elegans Pér. (Text-figs. 15, 30 and 42)

Schizonycha elegans Péringuey, 1904, p. 242.

Length 15-16.5 mm. Breadth 6.5-8 mm.

MALE

Colour generally testaceous with head and pronotum castaneous.

As can be seen from the figures given above, *S. elegans* appears to have a range of size comparable to the lower end of the size range of *S. rugosa*, but below the

known range of *S. fatidica*. This is interesting in view of the fact that the genitalia of the present species are almost identical with those of *S. fatidica* whereas they are readily distinguishable from those of *S. rugosa*.

One apparently constant feature of *S. elegans* is a more transverse pygidium than is usual in either *S. rugosa* or *S. fatidica* (5.5–6.8).

Genitalia (Text-fig. 99).

FEMALE. Unknown.

Type locality : Rustenburg, Transvaal (S.A.M.).

Other material examined from : Transvaal : Rustenburg ; Pretoria (B.M. (N.H.), F.); Pienaars River ; Potchefstroom (F.). Cape Province : unlocalized (coll. Brinckner).

Total material seen : 10 examples.

S. noscitata Pér.

Schizonycha noscitata Péringuey, 1904, p. 243.

Length 17 mm. Breadth 9 mm.

MALE

"Chestnut brown ; head and prothorax ferrugineous, each puncture on the upper side bears a whitish, small, yet conspicuous hair, the ciliae along the outer margins of the prothorax and of the anterior part of the elytra are long, and the pectus is very pubescent ; club of the antennae flavescent ; frontal part of the head and also the clypeus very closely and deeply punctured, the punctures non-granulose, the former is blunt in the median anterior part, but hardly sinuate, the clypeal carina is very arcuate, and somewhat angular in the middle ; the basal carina is not much raised, and is grooved ; prothorax moderately rounded laterally at about the median part, very little narrowed, and not sinuate thence to the basal angle, covered with irregular, round, cicatricose punctures set somewhat closely along the anterior margin and the sides, but much more scattered and broader in the posterior, and having there a median, smooth, somewhat raised space, and a few smaller similar areas across ; the outer margins are serrate, more strongly so in the anterior than in the posterior part ; scutellum with two irregular lateral rows of punctures ; elytra ampliate laterally from about the median part, the punctures deep ; pygidium with scattered, fairly deep punctures ; abdominal segments as closely and numerously punctured in the median part as on the sides, penultimate one wider than the preceding, last one broad, very swollen ; tarsi long. The claws are missing in my male example."

Genitalia (Text-fig. 102).

FEMALE. Unknown.

Type locality : "Cape Colony (? Namaqualand)" (as recorded by Péringuey).

The example considered by the South African Museum to be the type of *S. noscitata* and made available to me for study is in fact a *female* specimen of *S. profuga* Pér. (p. 167). The species is unknown to me other than from its description and from

this evidence I am inclined to think that it ought properly to be placed in the group I have christened the "*rugosa*" group of species. The genitalia, redrawn from Péringuey, are very similar in appearance to those of *S. elegans*, described above.

S. fartula Pér.

Schizonycha fartula Péringuey, 1904, p. 206.

Schizonycha tumida Blanchard (*nec* Cast.), 1850, p. 150 (*syn. nov.*).

Schizonycha tumida Burmeister (*nec* Cast.), 1855, p. 267 (*syn. nov.*).

Schizonycha tumida Péringuey (*nec* Cast.), 1904, p. 225 (*syn. nov.*).

Length 13.5–15 mm. Breadth 7.5–9 mm.

MALE

Colour generally light ferrugineous, sometimes castaneous. *Head* with labral emargination strongly obtuse; anterior face of clypeus vertically convex and with a narrow to moderate median gap in its row of setiferous punctures; anterior edge of clypeus rounded, somewhat flattened medially, but not truncate; clypeal carina shallowly arcuate; frontoclypeal suture also shallowly arcuate, indistinct; frons longer in midline than clypeus; clypeal punctures sparse, irregularly arranged, elongate with their internal borders sharply formed; frontal punctures also irregularly spaced, more closely set than those of clypeus, slightly asperose; head sharply angled at vertex, but without a raised transverse carina there; angulation at vertex feebly arcuate when viewed from above. *Pronotum* with anterior border sinuate laterally; anterior and posterior angles obtuse; lateral borders with outstanding setae longer than basal anterior tarsal segment; hind margin without a raised posterior border in front of scutellum; anterior margin closely scabropunctate; surface with two transverse, subbasal impunctate areas; disc usually sparsely annulate-punctate, punctures generally separated by more than their own diameter; setae in punctures minute, inconspicuous; hind margin of pronotum usually bearing a row of sparsely set, long, testaceous, suberect setae; intervals between punctures finely shagreened. *Scutellum* punctate laterally; interval between punctures finely shagreened. *Elytra* with punctures separated by about their own diameter, rather irregularly spaced, each bearing a minute seta; lateral borders set with stiff, outstanding setae from bases to level of second abdominal segment or slightly beyond; intervals between elytral punctures finely shagreened. *Pygidium* (Text-fig. 26) transverse (c. 25 : 32); set with annulate punctures separated as a rule by more than one diameter and bearing minute setae about as long as the diameter of a puncture; apical border of pygidium distinctly broader than lateral and basal borders; intervals between punctures finely shagreened, usually set with micro-punctures as well. *Metasternum*, *episterna* and hind coxae usually with long, fine setae in punctures; intervals finely and faintly shagreened. *Abdominal segments* scabroso-punctate laterally; setae in punctures non-squamiform, of variable length, usually longer than the diameter of a puncture; intervals between punctures finely shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal

segment distinctly shorter than second ; tarsal claws with upper ramus longer than lower, emarginate beneath apex ; lower ramus of claws closely applied to upper.

Genitalia (Text-figs. 105 and 106).

FEMALE. More rounded in form than the *male* ; with shorter lamellae to the antennal club ; with the basal hind tarsal segment as long as the second segment ; with the rami of the tarsal claws usually somewhat divergent and with the pubescence of the metasternum, episterna and hind coxae usually somewhat less conspicuous than in the *male*.

Type locality : Stellenbosch, Cape Province (S.A.M.).

Other material examined from : Cape Prov. : Somerset West (S.A.M.) ; Stellenbosch (S.A.M. and B.M. (N.H.)) ; "Cape of Good Hope" (B.S.S., F., Z.M.B., B.M. (N.H.)) ; Darling (S.A.M.). Natal : Port Natal (B.S.S.).

Péringuey described *S. fartula* from the *female* alone. His interpretation of *S. tumida* Cast. (p. 74) included both sexes of a species which, upon examination of the material, proves to be conspecific with the type specimen of *S. fartula*.

The material in the Burmeister collection over the name *S. tumida* agrees with that author's published interpretation of the species. It consists of two *males* and one *female* which again are examples of *S. fartula* Pér.

The actual specimen catalogued by Blanchard (1850) as *S. tumida* Cast. is still in the collections of the Museum d'Histoire naturelle, Paris and this too is an example of *S. fartula* Pér. (*female*).

Thus, in the absence of definite proof as to the identity of *S. tumida* Cast. (p. 74), there is a single species given that name by Blanchard, Burmeister and Péringuey and which was also redescribed by Péringuey under a new name.

Assuming the true *S. tumida* Cast. to be different from the later interpretation of it, there is a *S. tumida* of authors, the first available name for which is a junior synonym, *S. fartula* Pér.

S. crinita Brske.

Schizonycha crinita Brenske, 1898, p. 356.

Schizonycha crinita Brsk., Péringuey, 1904, p. 204.

Length 14 mm. (Péringuey gives 15-16 mm.). Breadth 8 mm.

FEMALE

Derm pale testaceous with head and pronotum darker. *Head* with labral emargination obtuse (c. 120°) ; anterior clypeal face strongly convex vertically, with a median gap in its row of setiferous punctures which is partially bridged by non-setiferous punctures ; anterior edge of clypeus shallowly biarcuate, directed obliquely backward laterally toward eyes ; clypeal carina feebly arcuate, bluntly angled medially ; vertex without a transverse carina, not sharply angled, set with very closely arranged punctures which are distinctly smaller than those of frons ; clypeal punctures frequently slightly elongate, their borders sharply formed ; frontal punctures almost circular or slightly transverse, separated by about one diameter or less, more regularly and closely arranged toward eyes ; clypeus with a vestigial longitudinal median carina arising from anterior edge. *Pronotum* with anterior

border strongly sinuate laterally, directed obliquely backward to anterior angles; posterior margin without a raised hind border in front of scutellum; lateral borders with outstanding setae longer than basal anterior tarsal segment; surface with a transverse, subbasal, impunctate space on either side and with a more or less well-defined longitudinal median impunctate area on disc; discal punctures smaller and shallower than those of frons, transverse, separated by more than one transverse diameter as a rule and bearing minute, scarcely discernible setae, about as long as the longitudinal diameter of a puncture; punctures along extreme anterior margin asperose; punctures anterior and posterior borders bearing long, erect setae similar to those along lateral borders; intervals between punctures of disc and margins with faint, fine, more or less complete shagreening. Scutellum transverse (9:16); with a very few, scattered punctures on either side of midline; surface finely shagreened. *Elytra* with punctures separated by slightly more than one diameter as a rule, bearing minute setae similar to those of pronotum; intervals with fine, faint, incomplete microsculpture; lateral borders fringed with outstanding setae from bases to apical borders, those near shoulders very long, setae becoming shorter toward apices. Pygidium almost quadrate (13:15); feebly convex; set with small, scattered punctures separated by up to four diameters or more and bearing minute setae about as long as the diameter of a puncture; intervals finely shagreened. Metasternum, episterna and hind coxae densely set with long, fine, pale yellow hairs. Abdominal segments two, three and four each with a single row of punctures across the disc; punctures bearing setae almost half as long as segments; segments pluripunctate laterally, punctures here usually bearing setae similar to those of discs of segments, but with a few punctures bearing short, white squamiform setae; penultimate segment with irregularly spaced, asperose punctures across disc as well as along lateral margins, all punctures bearing fine setae of varying lengths; intervals finely shagreened, very faintly so toward midline. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment and second segment subequal; tarsal claws with upper ramus almost twice as long as lower and strongly emarginate beneath apex.

MALE. Unknown.

Type locality: Cape of Good Hope (Z.M.B.).

I have seen only the type specimen of this species and have been unable to relate it to any known *male*. The setae along the anterior and posterior borders of the pronotum are peculiar and would seem to indicate a close relationship with *Trichoschiza* Moser. In general appearance *S. crinita* resembles *S. ciliata* Burm. (p. 146), but the latter species has a well-marked longitudinal median clypeal carina, has no setae along the anterior and posterior borders of the pronotum, has the labral emargination almost or quite rightangled and has much shorter setae in the punctures across the discs of the abdominal segments.

S. dissensa Pér.

Schizonycha dissensa Péringuey, 1904, p. 227.

Length 12-13 mm. Breadth 7-8 mm.

MALE

Colour varying from dark red-brown to black, surface not very shining. *Head* with labral emargination slightly obtuse ; anterior face of clypeus vertically convex, usually with a narrow median gap in its row of setiferous punctures ; clypeal carina feebly angled medially ; head sharply angled at vertex and with a vaguely indicated transverse carina on vertex ; clypeal punctures elongate ; frontal punctures closely and irregularly arranged, somewhat scabrose ; clypeus with a longitudinal median carina arising from middle of anterior edge and continuing backward to meet middle of clypeal carina. *Pronotum* with anterior border sinuate toward obtuse, but forwardly directed anterior angles ; posterior angles obtuse but briefly rounded ; lateral borders with outstanding setae as long as or longer than basal anterior tarsal segment ; hind margin without a raised posterior border in front of scutellum but with a row of long, upstanding setae similar to those along lateral borders ; surface with a longitudinal median and two transverse, subbasal impunctate areas ; elsewhere closely punctured, punctures more closely set and slightly scabrose toward anterior border ; punctures bearing minute, scarcely discernible setae ; intervals between punctures finely, but strongly shagreened. Scutellum transverse, rounded apically ; set with a few punctures on either side of midline ; intervals finely shagreened. *Elytra* unusually depressed ; punctures of disc separated by their own diameter or more, rather irregularly arranged, each bearing a minute seta ; intervals between punctures finely, but strongly shagreened ; lateral borders set with stiff, outstanding setae from bases to, or almost to apicosutural angles ; epipleura (Text-fig. 28) not inflected along apical borders, but vertical. Pygidium transverse (5 : 7) ; annulate-punctate, with punctures a little more closely set on apical half ; intervals finely shagreened. Metasternum, episterna and hind coxae with closely set punctures bearing long, testaceous setae. Abdominal segments with a row of asperose, setiferous punctures across each as well as irregularly spaced, non-asperose punctures each of which bears a minute, almost colourless seta ; intervals finely shagreened, less strongly so toward midline. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment slightly shorter than second segment ; tarsal claws strongly curved, deeply cleft, with the upper ramus distinctly longer than the lower ramus.

Genitalia (Text-figs. 107 and 108).

FEMALE. Unknown to me. Péringuey records that the basal hind tarsal segment is longer than the second segment and that the tarsi as a whole are shorter in the *female*, but does not give any other sexual differences.

Type locality : Cape Province (no exact locality) (S.A.M.).

Other material examined from : The only other example of this species known to me is a *male* in the British Museum (Nat. Hist.) which is labelled "Nov. Holl.", an obviously incorrect locality.

***S. unicolor* (Herbst)**

Melolontha unicolor Herbst, 1786, p. 154.

Melolontha unicolor Herbst, 1790, p. 156.

Melolontha unicolor Herbst, Schönherr, 1817, p. 172.

Schizonycha unicolor (Herbst), Blanchard, 1850, p. 149.

Schizonycha unicolor (Herbst), Lacordaire, 1856, p. 289.

Schizonycha unicolor (Herbst), Burmeister, 1855, p. 267.

Schizonycha unicolor (Herbst), Péringuey, 1904, p. 206.

Length 12.5–15 mm. Breadth 7–8 mm.

MALE

Derm reddish-castaneous, moderately shining; head and limbs darker in some examples. *Head* with labral emargination very slightly obtuse; anterior clypeal face vertically convex, with a narrow median gap in its row of setiferous punctures; anterior edge of clypeus feebly biarcuate; clypeal carina angled medially; vertex sharply angled; clypeus with a longitudinal median carina arising from anterior edge; clypeal punctures elongate, sparsely arranged; frontal punctures elongate or obliquely transverse, more closely arranged than those of clypeus, bearing minute, white setae. *Pronotum* with anterior border slightly sinuate laterally, sloping obliquely backward toward anterior angles; posterior angles obtuse, very briefly rounded; outstanding setae along lateral borders longer than basal anterior tarsal segment; hind margin without a raised posterior border, but set with upstanding setae in front of scutellum similar to those along lateral borders; surface with two transverse, subbasal impunctate areas and a vaguely indicated longitudinal median impunctate area; punctures of disc variable in size, separated by from less than one to several diameters and bearing minute, white setae about as long as the diameter of a puncture; punctures more closely and regularly spaced along anterior margin; intervals between punctures finely shagreened. Scutellum twice as broad as long; set with setiferous punctures laterally, some punctures bearing long, testaceous setae, others short, white hairs; intervals between punctures finely shagreened. *Elytra* (Text-fig. 27) with punctures separated by about one diameter, bearing setae scarcely more conspicuous than those of pronotum; intervals between punctures finely shagreened; lateral borders set with stiff, outstanding setae from bases to at least the level of the fourth abdominal segment. Pygidium almost quadrate; shallowly but more or less evenly convex; set with shallow, rather sparsely arranged punctures bearing minute setae; intervals finely shagreened, but rather less strongly so than elytral intervals. Metasternum, episterna and hind coxae with long, fine, yellowish-testaceous setae in punctures. Abdominal segments each with a single transverse row of punctures bearing long, testaceous setae as well as numerous irregularly arranged punctures bearing minute, white hairs, not or scarcely longer than the diameter of a puncture; fifth abdominal segment with punctures bearing long setae less regularly arranged, not in a single transverse row; intervals between punctures finely shagreened, less strongly so toward midline. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment very slightly shorter than second segment; tarsal claws with upper ramus longer than lower and emarginate beneath apex.

Genitalia (Text-figs. 109 and 110).

FEMALE. Differs from the *male* in having reduced wings, being more rounded in outline, in that the setae along the lateral borders of the elytra do not extend backward beyond the level of the second abdominal segment, in that the basal hind tarsal

segment is very slightly longer than the second segment and the setae of the hind coxae are shorter and more sparsely arranged than those of the metasternum and metepisterna.

Type locality : Cape of Good Hope (Z.M.B.).

Other material examined from : Cape of Good Hope (Univ. Halle).

In 1786, Herbst described *Melolontha unicolor*, stating it to be an East Indian species. Four years later he published another description under the same name, this time giving the locality as "Cap". The two descriptions differ slightly in detail, but with the second there is a reference to the 1786 definition of *M. unicolor*. This can only be taken to mean that Herbst thought he was redescribing his earlier species. Either he changed his mind as to the origin of the material, or he thought that the species occurred in both localities. If the latter were true it is surprising that he did not give both localities when publishing the second description. At least one other species described by Herbst in 1786 as from the East Indies appears in the 1790 publication as being from the "Cap". This seems to support the theory that he discovered his earlier locality record to be incorrect and altered it for the redescription.

The slight differences between the two descriptions could be due to a *male* forming the basis for the first and a *female* for the second. On the other hand the discrepancies consist of characters mentioned in the second report, but omitted from the first, so the descriptions could be of the same insect. Certainly the figure accompanying the first description appears to be a *female*. Beyond the variation in locality and without there being two sets of material known to have been used by Herbst in preparing his descriptions, there is no evidence to show that more than one species was involved.

It is proposed here to adopt the view, previously accepted by all authors other than Gmelin in the 13th edition of the *Systema Naturae*, that Herbst described a single species as *Melolontha unicolor* in 1786, redescribed it in 1790, at the same time correcting his earlier reference to its distribution.

There is thus a south African species *Melolontha unicolor* Herbst (1786) which was transferred to *Schizonycha* Dejean by Blanchard in 1850.

Subsequent to the second date, only two workers have made any attempt to interpret the species. Péringuey (1904) was uncertain of its identity and tentatively synonymized with his own species *S. fartula* (p. 126). Burmeister (1855) was more positive in his attitude, interpreting *S. unicolor* as a large, broad species, distinguished from others of similar size by its unusually large head.

The Moser collection in the Zoologisches Museum, Berlin, contains an old *female* specimen which has been labelled as *Schizonycha unicolor* Herbst by Blanchard. This example has been loaned to me by Dr. Delkeskamp with the suggestion that it ought to be regarded as the type of Herbst's species. Presumably it was accepted by Blanchard as an authentic specimen of *Melolontha unicolor* Herbst and, apart from its being a little smaller than Herbst would seem to indicate, there is nothing to prevent it being material upon which the description of *unicolor* was based. Certainly it agrees very well with the figure of the species given by Herbst in 1786. The suggestion made by Dr. Delkeskamp has been adopted in the present work.

The material identified as *S. unicolor* in the Burmeister collection consists of two *female* examples of *S. fartula* Pér. (p126.) and two *male* specimens of another species. Although the latter are larger than the *female* type specimen referred to above, I am sure that they are conspecific with it. The description of the *male* of *S. unicolor* and the figure of its genitalia are based on these two specimens.

S. hybrida (Pér.)

Atys hybrida Péringuey, 1904, p. 253.

Length 10–12 mm. Breadth 5.5–6 mm.

MALE

Colour generally testaceous with head and pronotum more reddish. *Head* with labral emargination strongly obtuse; anterior clypeal face vertically convex and with a complete row of setiferous punctures along it; anterior edge of clypeus semicircular or sometimes briefly truncated medially; clypeal carina biarcuate; frontoclypeal suture also biarcuate and angled medially; frons as long as clypeus in midline, irregularly punctured; clypeus set with more or less elongate punctures bearing small, narrowly squamiform setae; basal cephalic carina well marked. *Pronotum* with anterior border sinuate; anterior and posterior angles obtuse, posterior angles briefly rounded; lateral borders feebly serrate, setae along them about as long as basal anterior tarsal segment; hind margin without a raised posterior border in front of scutellum; disc set with crescentic punctures, more closely set and somewhat scabrose anteriorly, punctures bearing small, subrecumbent, slightly squamiform setae; two subbasal, transverse impunctate areas present; intervals faintly and finely shagreened. Scutellum with punctures bearing squamiform setae similar to those on pronotum; intervals more strongly shagreened than pronotal intervals. *Elytra* with punctures separated by about their own diameter, bearing squamiform setae similar to those on pronotum; intervals very faintly roughened; lateral borders with long, outstanding setae from bases to level of second abdominal segment, setae behind this point very small, white, narrowly squamiform. Pygidium slightly transverse; sparsely punctured, punctures a little more closely set toward basal angles; intervals similarly sculptured to those of scutellum. Metasternum, episterna and hind coxae with short, sparse, outstanding setae on the first and last, a mixture of short setae and subrecumbent, slightly squamiform setae present on episterna. Abdominal segments with recumbent, squamiform setae, slightly more conspicuous than those of elytra; a few long bristles present also, especially on penultimate segment; intervals finely and faintly shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment shorter than second; tarsal claws with upper ramus slightly longer than lower, upper ramus slightly emarginate beneath apex.

Genitalia (Text-figs. III and II2).

FEMALE. Very similar to the *male*, but the lamellae of the antennal club are shorter, the pygidium is less convex and the basal hind tarsal segment is as long as the one following.

Type locality : Newcastle, Transvaal (S.A.M.).

Other material examined from : Transvaal : Pretoria (B.M. (N.H.), F. and Div. Ent.) ; Barberton ; Mooiplaats (F.) ; Potchefstroom (F.) ; Kruger National Park ; Johannesburg (F.) ; Rustenburg.

Total material seen : 38 examples.

S. mediastina Pér.

Schizonycha mediastina Péringuey, 1904, p. 209.

Length 11–11.5 mm. Breadth 5.5 mm.

MALE

Colour fuscous with elytra somewhat lighter. *Head* with labral emargination strongly obtuse ; anterior clypeal face convex vertically, its row of setiferous punctures entire ; anterior edge of clypeus truncate medially ; clypeal carina arcuate, usually not strongly raised ; frontoclypeal suture not distinct ; frons slightly longer in midline than clypeus ; basal cephalic carina well-marked, punctate behind, sometimes forwardly produced medially ; frontal and clypeal punctures large, closely set, those of frons slightly scabrose. *Pronotum* with anterior border strongly sinuate, anterior angles obtuse ; posterior angles almost completely rounded ; hind margin without a raised posterior border medially ; lateral borders strongly serrate, their setae usually slightly shorter than basal anterior tarsal segment ; disc with annulate punctures, separated by from less than one to several diameters, punctures somewhat scabrose along anterior and lateral margins, bearing small, white, squamiform setae, setae larger and more conspicuous along lateral margins ; two well-marked, transverse, subbasal, impunctate areas present ; intervals finely, but distinctly shagreened. *Scutellum* slightly transverse, variably punctate, usually with a few punctures anterolaterally, but sometimes impunctate ; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, each bearing a small, squamiform seta as long as, or slightly longer than the diameter of a puncture ; intervals more coarsely and strongly shagreened than on pronotum ; lateral borders with long, outstanding, testaceous setae near shoulders, elsewhere with minute, whitish setae. *Pygidium* very shallowly annulate-punctate, each puncture bearing a squamiform seta similar to those of elytra ; intervals finely shagreened. *Metasternum*, *episterna* and hind coxae with, for the most part, large, squamiform setae in punctures, anterior areas of metasternum with long, testaceous, non-squamiform setae. *Abdominal segments* with appressed, squamiform setae in punctures everywhere except for a narrow median area, setae variable in size, mostly about as large as those on metasternum, some smaller, but always distinctly larger than those of upper surfaces ; intervals finely shagreened ; a few, outstanding, non-squamiform setae also present on abdominal segments. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment about three fourths as long as second ; femora and tibiae with squamiform setae as well as outstanding bristles ; tarsal claws (Text-fig. 14) with lower ramus less than half as long as upper and less robust at base.

Genitalia (Text-figs. 113 and 114).

FEMALE. This species is known from the *male* only.

Type locality: S. Africa (no exact locality) (S.A.M.).

Other material examined from: Cape Province: Deelfontein; "Cap" (Krebs.) (Z.M.B.); Nouport (F.).

Total material seen: 14 examples.

S. insuesa Pér.

Schizonycha insuesa Péringuey, 1904, p. 212.

Length 12 mm. Breadth 6 mm.

MALE

A description of this species would correspond almost exactly with one of *S. barda* Burm. (p. 135) except for the characters mentioned in the key to species and for the points referred to below.

In *S. insuesa* the clypeal carina is slightly more strongly raised. The setae along the lateral borders of the pronotum are relatively longer, being as long as, or slightly longer than the basal anterior tarsal segment. The scutellum of the type specimen, the only example of the species known to me, has a longitudinal median sulcus. The pygidium is damaged in the holotype. The metasternum, episterna and hind coxae are set with long, though sparse setae and not with merely a few, short, recumbent, squamiform setae as is the case in *S. barda*.

Genitalia (Text-fig. 115) (after Péringuey as the type specimen no longer has any genitalia).

FEMALE. Unknown.

Type locality: Cape Province (no exact locality) (S.A.M.).

The type is the sole example of this species known to me.

S. puerilis Pér.

Schizonycha puerilis Péringuey, 1904, p. 209.

Length 9.5-10 mm. Breadth 4.75 mm.

MALE

Derm pale yellowish testaceous with head and pronotum slightly darker. *Head* with labral emargination (Text-fig. 19) strongly obtuse; anterior face of clypeus feebly convex vertically, without a gap in its row of setiferous punctures; anterior edge of clypeus arcuate, somewhat flattened medially; clypeal carina feebly arcuate, more or less overlying frontoclypeal suture except near middle; a very vaguely indicated basal cephalic carina present; clypeal punctures elongate; frontal punctures obliquely transverse, slightly asperose; both frontal and clypeal punctures bearing minute setae. *Pronotum* (Text-fig. 35) with anterior border sinuate laterally, but anterior angles not, or scarcely directed obliquely backward; posterior angles

strongly obtuse ; posterior margin without a raised hind border in front of scutellum ; setae along lateral pronotal borders shorter than basal anterior tarsal segment ; disc with transverse, subbasal, impunctate areas not clearly marked ; punctures of disc slightly transverse, variably separated by from less than one to several diameters, bearing minute setae similar to those on head ; intervals finely, but distinctly shagreened. Scutellum slightly transverse, with a few scattered, circular punctures bearing setae similar to those of pronotum ; intervals almost smooth. *Elytra* with punctures separated by somewhat more than their diameter, bearing setae as small as those on pronotum ; intervals finely and rather faintly shagreened ; lateral borders with stiff, outstanding setae from bases to about level of first abdominal segment. Pygidium feebly transverse, moderately convex ; shallowly and sparsely punctured, punctures usually separated by more than their own diameter, bearing minute, inconspicuous setae ; intervals finely shagreened. Metasternum, episterna and hind coxae rather sparsely setoso-punctate ; punctures on anterior parts of metasternum with long, fine, outstanding setae ; setae elsewhere much shorter, slightly coarser, more or less appressed. Abdominal segments with sparsely set punctures bearing setae of different lengths, similar to those of metasternum and epimera ; intervals faintly and finely shagreened laterally, almost smooth toward midline. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment a little shorter than second ; upper ramus of all tarsal claws broader and more than twice as long as lower.

Genitalia (Text-figs. 67 and 68).

FEMALE. Unknown to me, but Péringuey states that its distinguishing feature lies in the semicircular anterior edge to the clypeus.

Type locality : The specimen sent to me as the type and whose authenticity I have no reason to doubt, bears the data " Kimberley 1884 ". This locality is not among those listed by Péringuey for the species (S.A.M.).

Other material examined from : Transvaal : Schweizer Reineke.

Other localities given by Péringuey are : Cape Prov. : Griqualand West ; Kuruman ; Bechuanaland.

Total material seen : 3 examples.

S. barda Burm.

Schizonycha barda Burmeister, 1855, p. 273.

Schizonycha barda Burm., Péringuey, 1904, p. 218.

Length 10.7-13 mm. Breadth 5.5-7 mm.

MALE

Colour usually almost black. *Head* (Text-fig. 20) with labral emargination very strongly obtuse ; anterior clypeal face almost plane vertically and with a complete, although sometimes irregularly arranged row of setiferous punctures along it ; anterior border of clypeus very broadly truncated medially ; clypeal carina shallowly raised, feebly arcuate ; basal cephalic carina variable, usually well marked ; clypeal punctures shallow, their internal margins only sharply formed ; frontal punctures

shallow, more closely set laterally than medially, antero-internal margins sharply formed; both clypeus and frons with minute, recumbent, almost white setae in punctures. *Pronotum* with anterior border sinuate laterally; anterior and posterior angles obtuse; posterior margin without a raised hind border in front of scutellum; lateral borders bearing outstanding setae shorter than basal anterior tarsal segment; surface with transverse, subbasal impunctate areas well marked; disc with more or less circular, shallow punctures bearing minute setae similar to those of head, punctures either containing a $\cap$ -shaped groove or annulate; intervals finely shagreened. Scutellum variably punctured, sometimes impunctate; intervals finely shagreened. *Elytra* with punctures usually separated by more than their diameter, bearing minute punctures similar to those of pronotal punctures; intervals finely, but distinctly shagreened; lateral borders with a few long, outstanding setae near bases, setae elsewhere short, white, more or less appressed. Pygidium very faintly punctured, punctures separated by several diameters; intervals finely shagreened; pygidium feebly convex in profile. Metasternum, episterna and hind coxae with short, sparsely arranged setae anteriorly, setae on posterior parts of metasternum, episterna and on hind coxae shorter than elsewhere, often white and narrowly squamiform. Abdominal segments very sparsely punctate medially, punctures more closely set toward lateral borders; punctures bearing either short, white, appressed, narrowly squamiform setae or slightly longer, fine, non-squamiform setae; the squamiform setae are of varying length, some longer, others shorter than squamiform setae of metepisterna; intervals finely shagreened toward lateral borders, progressively less strongly so toward middle. *Legs* (Text-fig. 45) with anterior tibiae strongly tridentate; basal hind tarsal segment about three fourths as long as second; tarsal claws with lower ramus very short, set at rightangles to the upper ramus (Text-fig. 13).

Genitalia (Text-figs. 116 and 117).

FEMALE. Differs from the *male* in having the body outline oval instead of oblong. It is apterous and generally larger than the *male*. The tarsal claws of the *female* are more stoutly built, especially the short, downwardly directed lower ramus.

Type locality: Natal Bay (coll. Drege) (Univ. Halle).

Other material examined from: Cape Province: Dunbrody, Redhouse (S.A.M.); no exact locality (Fry coll.).

Péringuey gives Uitenhage, Cape Province as a locality for *S. barda*.

Total material seen: 8 examples.

I have been allowed to examine the material named as *S. barda* in the Burmeister collection. It consists of two *males*, both of which agree with the original description of the species and with Péringuey's interpretation of it. I hereby select one of them, which I have labelled appropriately, as the lectotype of *Schizonycha barda* Burmeister.

S. effeta Pér.

Schizonycha effeta Péringuey, 1908, p. 700.

Length 10–11 mm. Breadth 5 mm.

MALE

This species is very closely related indeed to *S. barda* Burm. Externally the two species are almost indistinguishable but for the colour of *S. effeta* which is reddish-testaceous and for the shape of the pygidium which in the latter species is markedly convex longitudinally. Also in *S. effeta* the anterior border of the pronotum is more strongly sinuate toward the anterior angles than it is in the case of *S. barda*.

Genitalia (Text-figs. 118 and 119).

FEMALE. Unknown.

Type locality: Pietersburg, Transvaal (S.A.M.).

Other material examined from: Cape Province: Willowmore (F.).

When describing this species, Péringuey referred to *S. transvaalica* for a comparison of external features and used *S. furva* (= *S. affinis* Boh.) as a guide to the shape of the male genitalia. He did not mention the fact that *S. effeta* is almost inseparable externally from *S. barda* other than by colour and a few minor details. The genitalia of the two species are quite distinct so there is no difficulty in separating male examples.

S. windhoekensis sp. n.

Length 11-11.5 mm. Breadth 5-5.5 mm.

MALE

Pale to medium testaceous with head and pronotum usually a little more red in colour. *Head* with labral emargination slightly obtuse, middle of emargination rounded; anterior face of clypeus convex vertically, with an entire row of setiferous punctures along it; anterior clypeal edge shallowly emarginate medially, broadly rounded laterally; clypeal carina rather shallowly arcuate; frontoclypeal suture visible although almost overlain by carina laterally; vertex without a transverse carina, not sharply angled; clypeal punctures with their inner borders sharply formed, bearing minute, appressed, laterally directed setae; frontal punctures slightly asperose, their anterior or antero-internal borders sharply formed, bearing setae similar to those of frons; vertex marked by very closely set punctures. *Pronotum* with anterior border strongly sinuate laterally, directed obliquely backward to anterior angles; posterior angles strongly obtuse, briefly rounded; hind margin without a raised posterior border; lateral borders with outstanding setae shorter than basal anterior tarsal segment; surface with well-marked transverse, subbasal, impunctate areas; disc with small, transverse punctures, separated by from less than one to several diameters, bearing minute, scarcely discernible setae; punctures more closely set and slightly asperose along anterior margin; intervals between punctures of disc and along margins finely, but strongly shagreened. Scutellum slightly transverse; set with small punctures separated by about their own diameter and bearing minute setae similar to those in pronotal punctures; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter or a little more, bearing minute setae scarcely more conspicuous than those of pronotal punctures; intervals between punctures finely, but quite strongly

shagreened; lateral borders set with stiff, outstanding setae from bases to apical borders; apical borders set with much shorter, inconspicuous setae. Pygidium convex, much more strongly so near apex than elsewhere; slightly transverse; punctures annulate, usually separated by one diameter or more, bearing minute setae about as long as the diameter of a puncture; intervals finely shagreened. Metasternum, episterna and hind coxae with fine, non-squamiform setae in punctures; setae on anterior parts of metasternum much longer than those elsewhere, setae on metepisterna shorter than shorter setae of metasternum and shorter than those of hind coxae; intervals between punctures finely and faintly shagreened. Abdominal segments with punctures concentrated toward lateral margins; punctures along lateral margins separated by more than one diameter and bearing non-squamiform setae of varying lengths, the longer setae comparable to those of hind coxae, the shorter setae less than half as long as this as a rule; intervals finely shagreened, progressively less strongly so toward midline. Legs with anterior tibiae strongly tridentate; basal hind tarsal segment about two thirds as long as second; tarsal claws with lower ramus about half as long as upper, upper ramus not emarginate beneath apex.

Genitalia (Text-figs. 122 and 123).

FEMALE. Slightly more stoutly built than the *male*. The antennal club is composed of shorter lamellae, the basal hind tarsal segment is almost as long as the second segment and the pygidium is less convex and bears near its apex a large, nasiform tubercle.

Holotype: A *male* in the G. Frey Museum, Munich. Windhoek, S-W. Africa.

Paratypes: 1 *male* with the same data as the holotype. 1 *female* Windhuk [*sic*], S-W. Afrika. Hartmann leg (F.).

S. marginata sp. n.

Length 10-10.5 mm. Breadth 4.75-5 mm.

MALE

This species is very like *S. windhoekensis*; described above; but differs as indicated in the key to species and in the following respects.

The head is more sharply angled at the vertex, showing a tendency to have a transverse carina there. The anterior border of the pronotum is less strongly sinuate laterally and not directed obliquely backward to anterior angles. The setae along the lateral borders of the elytra tend to be more sparsely arranged behind the level of the hind coxae. The setae on the anterior parts of the metasternum are relatively shorter.

Genitalia (Text-figs. 120 and 121).

FEMALE. Extremely similar to the *male*.

Holotype: A *male* in the South African Museum, Cape Town. Grootfontein, S-W. A[frica] March 1929 (J. S. Brown).

Paratypes: 1 *female* with same data as holotype. 1 *female* Otjavifontein, S-W. Africa 20.xi.1933 (K. Jordan).

This species is clearly closely related to *S. windhoekensis*, but it is at once distinguished from the latter species by the marginal bands of strong, though fine shagreening on the elytra. This curious feature is one which it shares with *S. livida* Klug (p. 153).

S. gonaqua Pér.

Schizonycha gonaqua Péringuey, 1904, p. 212.

Length 12–15 mm. Breadth 5.5–7.5 mm.

MALE

Colour dark castaneous. *Head* (Text-fig. 22) with labral emargination obtuse ; anterior face of clypeus vertically convex, without, or with a very brief median gap in row of setiferous punctures ; anterior edge of clypeus truncate medially ; clypeal carina angulate medially ; surface of clypeus raised medially to form a blunt, longitudinal median ridge ; frons slightly longer in midline than clypeus ; basal cephalic carina replaced by closely set punctures ; frontal punctures radially disposed about an anteromedian centre. *Pronotum* with anterior border strongly sinuate ; anterior angles slightly produced ; posterior angles obtuse ; lateral borders serrate, sinuate behind anterior angles, set with setae longer than basal anterior tarsal segment ; surface with two transverse, impunctate, subbasal declivous areas, one on either side of midline ; disc with a median longitudinal impunctate space in most examples, elsewhere with transverse punctures, slightly more closely set anteriorly and toward lateral margins, setae in punctures exceedingly minute and inconspicuous ; intervals finely and very faintly shagreened ; basal pronotal border not raised medially. *Scutellum* profusely punctate laterally ; intervals finely and faintly shagreened. *Elytra* with punctures separated by more than their diameter, especially toward apices, punctures bearing minute, inconspicuous setae, scarcely longer than the diameter of a puncture ; intervals very faintly shagreened around punctures, sculpture scarcely discernible ; lateral borders with outstanding, testaceous setae from bases almost to apicosutural angles, setae near bases as long as those along lateral pronotal borders, setae diminishing in length toward elytral apices. *Pygidium* transverse ; annulate-punctate, punctures separated by from one to two diameters, each bearing a minute seta similar to those of elytral punctures ; intervals finely, but distinctly shagreened. *Metasternum*, *episterna* and hind coxae closely punctate, punctures on episterna and anterior parts of metasternum often separated by less than their diameter, bearing long, yellowish white setae. *Abdominal segments* with slightly asperose punctures ; punctures along midline more or less restricted to a single transverse row on each segment, each puncture with a long, outstanding, testaceous seta ; punctures more numerous toward lateral margins, many bearing setae as above, others with shorter, recumbent, slightly squamiform setae ; intervals slightly wrinkled laterally, faintly shagreened toward extreme lateral margins. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment almost, or quite as long as second ; tarsal claws with lower ramus about half as long as upper, upper ramus strongly emarginate beneath apex.

Genitalia (Text-figs. 126 and 127).

FEMALE. Has the antennal club almost as long as that of the *male*, but may be distinguished by the following points: The pygidium is almost quadrate and more convex laterally. The lower ramus of all the tarsal claws is divergent from the upper ramus, instead of being closely applied to it as it is in the *male*.

Type locality: Namaqualand, Cape Province (S.A.M.).

Other material examined from: Cape Province: Garies (S.A.M. and F.); Lilyfontein (S.A.M.); Kleinsee (S.A.M.); Kamieskroon (S.A.M.); all in Namaqualand.

Total material seen: more than 7 examples.

S. gonaquoides sp. n.

Length 13 mm. Breadth 6-7 mm.

MALE

This species is extremely closely related to *S. gonaqua*, being almost indistinguishable from it other than by the characters given in the key to species and by the male genitalia. The description of *S. gonaqua* given above will apply equally well to *S. gonaquoides* with the exception of the head characters upon which the separation of the species is based.

Genitalia (Text-figs. 124 and 125).

FEMALE. Unknown.

Holotype: A *male* in the South African Museum, Cape Town. Klip Vlei, Garies, Namaqualand Nov. 1931 (Museum Staff).

Paratype: A *male*. Lilyfontein, Namaqualand Dec. 1931 (K. H. Barnard).

S. rotunda sp. n.

Length 13-16 mm. Breadth 7.5-9 mm.

FEMALE

Black to piceous. Wings reduced to much less than the length of the metasternum in most examples. *Head* with labral emargination about 120°; anterior face of clypeus vertically convex, gap in row of setiferous punctures narrow; anterior clypeal edge broadly truncate medially; clypeal carina distinct, not very strongly arcuate; basal cephalic carina indicated by a marked angulation of the head bordered posteriorly by a band of very closely set punctures; clypeus with a median longitudinal carina; frons slightly longer in midline than clypeus; clypeal punctures scabrose, frontal punctures irregular in size and spacing; punctures of frons and clypeus with small, recumbent, white, squamiform setae. *Pronotum* with anterior border almost evenly curved, briefly and shallowly arcuate just inside obtuse anterior angles; posterior angles strongly obtuse, briefly rounded; strongly serrate lateral borders with outstanding, curved, testaceous setae longer than basal anterior segment; hind border not raised medially; surface with two transverse, subbasal,

impunctate declivous areas, one on either side of midline ; disc with a longitudinal median impunctate space, elsewhere with transverse, often anteriorly emarginate punctures (Text-fig. 7), separated by from less than one to almost two diameters, each with a seta similar to those on head ; intervals finely and faintly shagreened ; punctures along anterior margin feebly scabrose. Scutellum strongly transverse, annulate-punctate laterally, setae in punctures similar to those of pronotal disc ; intervals finely and faintly shagreened. *Elytra* with punctures separated by slightly more than one diameter, each with a minute anterior tubercle from which arises a white, squamiform seta, broader and a little longer than those of pronotum ; intervals finely shagreened, more strongly so than pronotal intervals ; lateral borders with outstanding, testaceous setae from bases to level of apex of third abdominal segment, setae near bases as long as those along lateral pronotal borders, others decreasing in length toward elytral apices. Pygidium slightly transverse ; annulate-punctate, punctures usually separated by more than their own diameter and each with a squamiform seta similar to, although sometimes slightly longer than, those of elytra ; a more or less clearly defined, longitudinal median, impunctate area present ; intervals finely shagreened. Metasternum, episterna and hind coxae usually with long, fine, yellowish-white setae in punctures, metasternum and occasionally episterna also, with a few large, white, squamiform setae amongst hairs. Abdominal segments almost impunctate along midline, punctures, except on penultimate segment where they are more numerous, restricted to little more than a single, transverse row on each from which arise suberect bristles ; the single row on each segment is continued laterally, but here is accompanied by other punctures which bear large, appressed, white, squamiform setae, larger than any on upper surfaces ; punctures along extreme lateral margins with smaller squamiform setae, some no larger than those on elytra ; intervals extremely faintly shagreened medially, slightly more obviously so laterally. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment as long as second ; tarsal claws of all legs with lower ramus less than half as long as upper and less robust at base ; lower ramus divergent from upper, upper ramus emarginate beneath apex.

MALE. Unknown.

Holotype : In the South African Museum, Cape Town. East of Pakhuis Pass, Cape Province, Sept. 1947 (Mus. Exp.).

Paratypes : 4 with same data as holotype (S.A.M. and B.M. (N.H.)).

Although I have seen only the *female* of this species I have not hesitated to describe it in this revision for I feel that further collecting will establish the identity of the *male*. It may be one of those species already described, or it may have yet to be found.

S. globator (F.)

Scarabaeus globator Fabricius, 1781, p. 20.

Scarabaeus globator Fabricius, 1787, p. 10.

Scarabaeus globator Fabricius, 1792, p. 33.

Geotrupes globator (Fabricius), 1801, p. 21.

Melolontha globator (Fabricius) Olivier, 1789, p. 40, Tab. 6, Text-fig. 60.

Melolontha globator (Fabricius) Schönherr, 1817, p. 171.

Schizonycha globator (Fabricius) Blanchard, 1850, p. 149.

Schizonycha globator (Fabricius) Burmeister, 1855, p. 266.

Schizonycha globator (Fabricius) Péringuey, 1904, p. 204.

Schizonycha idonea Péringuey, 1904, p. 205 (*syn. nov.*).

Length 10–12 mm. Breadth 6–6.5 mm.

MALE

Colour black, derm dull. *Head* with labral emargination rectangular or slightly obtuse; anterior face of clypeus convex vertically, with at most a narrow median gap in its row of setiferous punctures; anterior border of clypeus broadly flattened medially, arcuate laterally; clypeal carina strongly raised, almost straight, weakly angled medially; vertex sharply angled, with at most a vague indication of a transverse carina; clypeal punctures large, their antero-internal borders sharply marked; frontal punctures rather more closely set than clypeal punctures, also with their antero-internal borders sharply defined; both frontal and clypeal punctures bearing small, white, slightly squamiform setae; clypeus usually with a more or less well defined longitudinal median carina. *Pronotum* with anterior border moderately sinuate laterally, with anterior angles not or only slightly directed obliquely backward; posterior angles strongly obtuse, briefly rounded; posterior margin without a raised hind border in front of scutellum; lateral borders with outstanding setae as long as or longer than basal anterior tarsal segment; surface with transverse, subbasal impunctate areas not well defined; punctures on disc large, circular, containing either a $\cap$ -shaped groove or annulate (Text-fig. 8) and bearing small, white, slightly squamiform setae, only a little larger than those on head, if at all; intervals finely shagreened; punctures along anterior margin more closely set than those of disc and slightly asperose. *Scutellum* slightly transverse, with or without a few punctures laterally; punctures, if present, smaller than those of pronotal disc, containing slightly smaller setae; intervals finely shagreened. *Elytra* with punctures separated by more than their own diameter as a rule, bearing narrowly squamiform setae, usually slightly broader and longer than those of pronotum; intervals finely shagreened; lateral borders with stiff, outstanding setae from bases to level of third abdominal segment, setae thence to apicosutural angles very small. *Pygidium* slightly transverse; shallowly annulate-punctate; punctures separated by a little less than their diameter, bearing white setae smaller than those of elytra; intervals finely shagreened. *Metasternum*, *episterna* and hind coxae set for the most part with long, fine, yellowish setae, sometimes with rather shorter setae on hinder parts of metasternum and episterna. Abdominal segments each with a transverse row of punctures bearing fine, outstanding setae as well as other punctures bearing short, white, appressed, more or less squamiform setae; setae of the second kind broader and more numerous toward lateral borders; intervals finely and faintly shagreened, distinctly less strongly so than intervals between coarse elytral punctures. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment not or only slightly shorter than second; tarsal claws with lower ramus as broad as upper and more than half as long.

Genitalia (Text-figs. 128 and 129).

FEMALE. Broader than *male* and more rounded in outline. Scutellum broadly transverse. Hind tarsi distinctly shorter than in the *male* and with the basal segment of the hind tarsi longer than the second. The setae along the lateral elytral borders from halfway to the apices are usually larger than in the *male* and are quite conspicuous to the naked eye.

Type locality : Cape of Good Hope (B.M. (N.H.)).

Other material examined from : Cape Province : Stellenbosch (Type of *S. idonea* Pér.) (S.A.M.) ; Klip Vlei, Namaqualand (S.A.M.). Ceres. "Cape of Good Hope" (B.S.S. and N.H.R.M.). "S. Africa" (no exact locality).

Total material seen : 11 examples.

Having had the opportunity of comparing the Péringuey type specimen of *S. idonea* with the type of *S. globator* (F.), I have no doubt but that they are one species. Péringuey's redescription of the species was no doubt due to his not associating the *male idonea* with the *female* of *globator*, the only sex he recognized of the latter species.

S. jordani sp. n. (Text-fig. 3)

Length 11.5–13 mm. Breadth 5–6 mm.

MALE

Testaceous with head and pronotum darker. *Head* with anterior face of labrum scarcely emarginate at all ; anterior clypeal face slightly reflexed medially, with an uninterrupted row of setiferous punctures along it ; anterior edge of clypeus straight medially, rounded laterally ; clypeal carina clearly marked and evenly arcuate for median four sixths, almost obliterated near eyes ; frontoclypeal suture not very distinct ; vertex without a transverse carina and not sharply angled ; clypeal punctures close-set, elongate, their internal borders sharply formed, punctures bearing minute setae ; frontal punctures slightly asperose, smaller and more closely set across vertex than elsewhere, bearing minute setae as on clypeus. *Pronotum* with anterior border shallowly arcuate medially, strongly sinuate laterally and directed obliquely backward to anterior angles ; posterior angles very strongly obtuse ; hind margin with an indistinctly raised posterior border in front of scutellum ; lateral borders not or scarcely crenulate for anterior fourth, bearing outstanding setae, some of which are at least as long as basal anterior tarsal segment ; surface with clearly indicated, transverse, subbasal, impunctate areas ; disc with small, sometimes slightly asperose punctures, each containing an inverted U-shaped groove and bearing a minute seta about as long as the diameter of a puncture ; discal punctures separated by one diameter or more, punctures along anterior margin more closely set and more noticeably asperose ; intervals with fine and faint shagreening and with micropunctures separated by several diameters. Scutellum transverse (2 : 3) ; punctured along lateral margins, punctures slightly larger than those on pronotal disc, bearing minute setae and also containing an inverted U-shaped groove ; intervals finely and rather faintly shagreened. *Elytra* with punc-

tures separated by from slightly less than one to about two diameters, bearing fine setae about equal in length to the diameter of a puncture; intervals finely shagreened; lateral borders with outstanding setae from bases to apical borders; apical borders set with very short, stiff setae. Pygidium slightly transverse (10:13); convex, more strongly so near apex than elsewhere; punctures small, annulate, separated by from one to about two diameters, bearing minute, scarcely discernible setae about as long as the diameter of a puncture; apical half of pygidium usually distinctly less closely punctured than elsewhere; intervals finely and faintly shagreened. Metasternum, episterna and hind coxae with long, fine, almost white setae in punctures; intervals between punctures almost smooth. Abdominal segments set with slightly asperose punctures; few punctures present across middle of segments, most punctures concentrated along lateral margins, but even here they are usually separated by at least one diameter; punctures bearing either short, fine, appressed, non-squamiform setae or longer, subrecumbent hairs, the latter being more or less confined to a single transverse row on each side of each segment except the penultimate where they are more scattered; shorter setae variable in length, but usually equal to between one and two puncture diameters; intervals finely and faintly shagreened laterally, almost or quite smooth toward midline. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment a little more than half as long as second; tarsal claws with lower ramus about three fourths as long as upper ramus and slightly broader, upper ramus emarginate beneath apex.

Genitalia (Text-figs. 130 and 131).

FEMALE. Very similar to the *male*, but with shorter lamellae to the antennal club and with a flatter pygidium which is not more strongly convex apically than elsewhere.

Holotype: A *male* in the British Museum (Nat. Hist.). Otjikata Lake, S-W. Africa 16.xi.1933 (K. Jordan).

Paratypes: 5 *males*, 1 *female* with the same data as the holotype. 2 *females* Sissekab, S-W. Africa 11.xi.33 (K. Jordan). 1 *male* Otjikoto-Deinap, S. West Africa Jan. 1923 Mus. Exped. (S.A.M.).

This species is very closely related in general appearance to *S. geilenkeuseri* Brske. (p. 190) and to *S. boschimana* Pér. (p. 189), but it appears in a different position in the key to species as it has setae on the basal border of the mentum, a feature absent from the other two.

S. clypealis sp. n.

Length 9-11 mm. Breadth 4-5 mm.

MALE

Colour pale testaceous with head and pronotum slightly darker. *Head* with labral emargination obtuse; anterior clypeal face vertically convex, with an entire row of setiferous punctures along it; anterior edge of clypeus backwardly angled medially where it is joined by a longitudinal median clypeal carina; transverse clypeal carina usually arcuate; basal cephalic carina not strongly marked, usually forwardly arcuate when viewed from above; clypeus longer in midline than frons; clypeal

punctures elongate ; frontal punctures irregular in size and distribution. *Pronotum* with anterior border sinuate, anterior angles directed obliquely backward ; posterior angles obtuse ; posterior margin with a feebly raised hind border in front of scutellum ; lateral borders set with outstanding setae as long as basal anterior tarsal segment ; disc usually with a longitudinal median and two transverse, subbasal impunctate areas ; elsewhere set with transverse, anteriorly emarginate punctures, somewhat scabrose along anterior margin, bearing minute, inconspicuous setae ; intervals finely shagreened. Scutellum transverse ; variably punctate ; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter or slightly less, setae in them a little more conspicuous than those of pronotal punctures ; stiff, outstanding setae along lateral borders sparsely set, reaching from bases to, or almost to, apices ; intervals of elytral disc very faintly roughened. Pygidium more or less evenly annulate-punctate or with punctures more closely set toward basal angles ; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures usually bearing long, fine setae, but with some, particularly on episterna and postero-lateral metasternal areas bearing large, squamiform setae much larger than setae in elytral punctures ; intervals between punctures very faintly roughened. Abdominal segments with punctures concentrated toward lateral margins, some punctures bearing narrowly squamiform setae, others, especially toward middle and along penultimate segment, with long, non-squamiform setae ; intervals faintly and finely shagreened. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment slightly shorter than second ; tarsal claws not deeply cleft, upper ramus twice as long as lower, sometimes somewhat broader.

Genitalia : (Text-figs. 132 and 133.)

FEMALE. Very similar to the *male*, but has the basal hind tarsal segment as long as the second, the pygidium is relatively flatter and the lamellae of the antennal club are slightly shorter.

Holotype : A *male* in the British Museum (Nat. Hist.). Hoffnung, S-W. Africa, 1,850 m. 5.1.1934 (K. Jordan).

Paratypes : 5 *males* and 1 *female* with the same data as the holotype. 1 *female* Hoffnung, S-W. Africa 11.1933 (K. Jordan). 1 *female* Hoffnung, S-W. Africa, 1,850 m. 26.1.1934 (K. Jordan). 1 *male* Otikata Lake, S.W. Africa 16.11.1933 (K. Jordan). 1 *male* Narubis, S-W. Africa Mar. 1921 (K. H. Barnard) (S.A.M.). 1 *female* Ombombo, S-W. Africa Feb. 1926 (Mus. Exped.) (S.A.M.). 2 *males* and 1 *female* Windhoek, S-W. Africa (Hartmann (F. and B.M. (N.H.))). 1 *male* and 1 *female* Abachaus, Otjiwarongo Dist. S-W. Afr. 1.1953 leg. G. Hobohm (B.S.S.).

S. damarina Pér.

Schizonycha damarina Péringuey, 1908, p. 678.

Length 16.5 mm. Breadth 8.5 mm.

FEMALE

Head and pronotum testaceous, elytra pale yellow. *Head* with angle formed by labral emargination about 120° ; anterior clypeal face vertically convex, without a

median gap in its row of setiferous punctures ; anterior edge of clypeus very shallowly arcuate, lateral edges sinuate ; clypeal carina very feebly arcuate, almost overlying frontoclypeal suture ; vertex with a roughly formed transverse carina which is obliterated medially by a patch of close-set punctures ; clypeal punctures more or less elongate ; frontal punctures irregular in outline and spacing, very closely set toward lateral borders. *Pronotum* with anterior border strongly sinuate laterally ; obtuse anterior angles directed obliquely backward ; posterior angles obtuse ; posterior margin with an entire raised hind border between hind angles ; lateral borders set with outstanding setae usually much longer than basal anterior tarsal segment ; surface with two, almost impunctate, subbasal, transverse areas and disc with a longitudinal median impunctate area as well ; punctures of disc faintly scabrose, more closely set and more strongly scabrose along anterior margin and anterolaterally ; punctures bearing minute, scarcely discernible setae ; intervals with faint traces of shagreening, more noticeable toward lateral margins. *Scutellum* irregularly punctate laterally ; punctures bearing minute setae as on pronotum ; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, bearing setae similar to those of pronotum ; intervals almost smooth, very faintly shagreened ; lateral borders with stiff, outstanding setae from bases almost to apices, becoming shorter toward apicosutural angles. *Pygidium* transverse ; convex, finely, sparsely and shallowly punctured ; intervals finely shagreened. *Metasternum*, *episterna*, hind coxae closely scabrosopunctate, with long, fine, very pale yellow setae in punctures. Abdominal segments with long, subrecumbent, yellow setae in punctures ; setae darker and coarser than those of metasternum ; intervals between punctures almost smooth. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment slightly longer than second (8:7). (The tarsal claws are missing from the type specimen, but Péringuey describes them as being with the lower ramus "as large and as strongly hooked as the upper").

MALE. Unknown.

Type locality : Okahandja, Damaraland, S-W. Africa (S.A.M.).

I have seen only the holotype of this species and am unable to relate it to a *male*.

S. ciliata Burm.

Schizonycha ciliata Burmeister, 1855, p. 268.

Length 15-16.5 mm. Breadth 8-9 mm.

MALE

Colour castaneous, head and pronotum usually darker than elytra. *Head* with labral emargination almost rectangular ; anterior clypeal face vertically convex, almost always with a moderately obvious median gap in its row of setiferous punctures ; anterior edge of clypeus biarcuate, sometimes weakly sinuate toward eyes ; clypeal carina very feebly arcuate, usually shallowly angulate medially ; frontoclypeal suture visible ; vertex without a transverse carina, moderately sharply angled, marked by small, closely-set punctures ; clypeus with a median longitudinal

carina arising from anterior edge and running backward toward clypeal carina ; clypeal punctures elongate, their internal borders sharply formed, punctures separated by about one transverse diameter, bearing minute, laterally-directed setae ; frontal punctures transverse, small, variably spaced, often separated by more than one diameter on middle of frons, but much more closely set toward eyes, punctures bearing setae similar to those of clypeus. *Pronotum* with anterior border sinuate laterally, directed obliquely backward toward anterior angles ; posterior angles obtuse ; posterior margin without a raised hind border in front of scutellum ; crenulate lateral borders set with setae longer than basal anterior tarsal segment ; surface usually with well-marked transverse, subbasal, impunctate areas and with a longitudinal median impunctate space as well ; discal punctures transverse, frequently separated by more or less their longitudinal diameter, punctures annulate or containing an inverted U-shaped groove and each bearing a minute seta not much longer than the length of a puncture ; setae in punctures toward anterior angles larger than those of disc ; punctures along anterior margin more closely set than those of disc, but not more asperose ; intervals finely, often faintly shagreened. Scutellum slightly transverse (6:7) ; impunctate mediobasally and along lateral margins ; punctures elsewhere similar to those of pronotum and bearing similar setae ; intervals finely shagreened. *Elytra* with punctures separated by more or less their own diameter on disc, a little more sparsely arranged toward apices ; punctures bearing minute setae, scarcely more conspicuous than those of pronotum ; intervals smooth or with traces of shagreening ; lateral borders with stiff, outstanding setae from bases to apices (Text-fig. 29). Pygidium not strongly transverse (12:15) ; convex ; set with annulate punctures usually separated by more than their diameter and bearing setae similar to those of pronotum ; setae in punctures generally longer toward upper angles of pygidium ; intervals between punctures finely shagreened. Metasternum, episterna and hind coxae densely clothed with long, fine, pale yellow setae ; punctures close-set, annulate ; intervals sometimes faintly shagreened. Abdominal segments more closely punctured toward lateral margins than on disc, punctures across middle of each segment often confined to a single row bearing long, fine, subrecumbent, yellow setae ; punctures toward and along lateral margins separated by their own diameter or more, bearing short, appressed, white, narrowly squamiform setae ; intervals finely, but not strongly shagreened. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment about as long as second ; tarsal claws with upper ramus nearly twice as long as lower and emarginate beneath apex.

Genitalia (Text-figs. 138 and 139).

FEMALE. Very similar to the *male*, but with shorter lamellae to the antennal club, with a flatter pygidium, particularly longitudinally, and with the basal hind tarsal segment a little longer than the succeeding segment.

Type locality : S-W. Africa (Univ. of Halle).

Other material examined from : Cape Province : Olifants river, between Citrusdal and Clanwilliam (S.A.M.) ; Garies (F. and B.M. (N.H.)) ; 12 miles from Klaver (F. and B.M. (N.H.)).

Total material seen : 10 examples.

There is a single *female* example over the name *S. ciliata* in the Burmeister collection at Halle. It agrees with the description of that species given by Burmeister and there is no reason for not regarding it as the type specimen of *S. ciliata*. As noted on p. 186 of this paper, Péringuey misinterpreted *S. ciliata* Burm., redescribing *S. perforata* Burm. under the former name and regarding the latter as a species known to him from its description alone and unidentifiable.

***S. laticia* n. n.**

Schizonycha comosa Péringuey (*nec* Burm.), 1904, p. 206.

Length 14.5–16 mm. Breadth 7.5–8.5 mm.

MALE

This species is very similar to *S. ciliata* Burm. (p. 146), but the latter generally runs to a different section of the key to species because it almost always has a noticeable median gap in the row of setiferous punctures across the anterior face of the clypeus. *S. laticia* differs from *S. ciliata* by this character, by the other characters referred to in the key and by the following points.

The median longitudinal clypeal carina is much shorter, generally extending only a short distance backward from the anterior edge of the clypeus. The anterior border of the pronotum is less strongly sinuate laterally and is not directed obliquely backward to the anterior angles.

Genitalia (Text-figs. 136 and 137).

FEMALE. Unknown to me. Péringuey states that it has the median longitudinal impunctate space on the pronotum more distinct than it is in the *male*. He also says that there is no longitudinal median impunctate area on the pygidium in the *female*.

Type locality: Péringuey gives Willowmore and Beaufort West, both in S-W. Cape Province as localities for this species.

Other material examined from: Cape Province: Matjesfontein; Letjesbosch Koup (S.A.M.); Thee Kloof, Fraserburg div. (S.A.M.); and a single example in the Zoologisches Museum, Berlin, labelled "Orlog Rivier. Meyer".

Total material seen: 5 examples.

The species which Péringuey interpreted as *S. comosa* Burm. is quite clearly identifiable from the figure given by him of the *male* genitalia. The material I have identified as this species also agrees with the size range given by Péringuey, the distribution he quotes and the few remarks he gives as to its general appearance. Thus, although I have not seen material identified by Péringuey as *S. comosa*, I am quite certain that I am familiar with the species to which he applied this name.

There is no material extant in either Burmeister's or Germar's collections bearing the name *S. comosa* Burm. It is not possible from the description alone to be certain as to its identity, but a comparison of the description with the species interpreted by Péringuey as *S. comosa* gives the following results,

Burmeister gives the length of his species as 5''' (13 mm.) and states that it is much narrower in build than *S. corrosa* Burm. The width of the latter species varies from 6.5–7.5 mm. (the type specimen being 7 mm. broad). The size of *S. comosa* which thus emerges is not compatible with the range given by Péringuey.

The locality given by Burmeister for *S. comosa* is "Weihnachtsbai" (= Bay of Natal). As far as can be seen at present, the species interpreted by Péringuey as *S. comosa* has a rather restricted distribution in the south western part of Cape Province.

The original description of *S. comosa* compares the species with *S. corrosa*. Burmeister states that the anterior angles of the pronotum are sharper than in *corrosa*. In the Péringuey species they are distinctly less sharp than in *S. corrosa*. The setae in the punctures of the metasternum, episterna and hind coxae of the species described above are very pale yellow and not red-gold as noted by Burmeister in the case of *S. comosa*.

It would thus appear quite clear that Péringuey misinterpreted *S. comosa* Burm., applying the name to a hitherto unknown species. This species is renamed and redescribed above as *S. laticia*.

As inferred above, I have been unable to establish the true identity of *S. comosa* Burm. I have listed it and its description among the "Species Incertae Sedis" on p. 74 of this paper.

S. quaesita Pér.

Schizonycha quaesita Péringuey, 1904, p. 216.

Length 14 mm. Breadth 8 mm.

MALE

Colour black, dull. *Head* with labral emargination acute; anterior face of clypeus not vertically convex, with a broad median gap in its row of setiferous punctures; clypeal carina broadly arcuate, feebly raised toward lateral borders; vertex moderately sharply angled, with at most a vestigial transverse carina laterally; clypeus with somewhat elongate, closely set punctures, their internal borders sharply defined, punctures bearing small, pale yellow setae; frontal punctures obliquely transverse, their antero-internal borders sharply marked, bearing setae slightly larger and more conspicuous than those of clypeus. *Pronotum* with anterior border evenly emarginate; posterior margin without a raised hind border in front of scutellum; surface with clearly marked, transverse, subbasal impunctate areas; disc with a longitudinal median impunctate area; discal punctures coarse, separated by less than one diameter as a rule, containing an inverted U-shaped groove and bearing small, pale yellow setae about as long as the diameter of a puncture; intervals between coarse punctures finely shagreened; lateral borders crenulate, set with stiff, outstanding setae of varying length, some longer than basal anterior tarsal segment. *Scutellum* transverse; punctures smaller than those of pronotum, usually congregated laterally; intervals finely shagreened. *Elytra* with punctures separated by one diameter or slightly more, bearing pale yellow, faintly squamiform setae a

little more conspicuous than those of pronotum; intervals finely shagreened; lateral borders with stiff, outstanding setae from bases to level of hind coxae, set with much shorter and less conspicuous setae from level of hind coxae to apical borders. Pygidium transverse (11 : 13-15); annulate-punctate, punctures separated by more than one diameter, each bearing a small seta, slightly smaller than those of elytra; intervals finely shagreened. Metasternum, episterna and hind coxae with long testaceous setae and broad squamiform setae in punctures, the latter mainly on episterna, lateral margins of hind coxae and toward posterior angles of metasternum; squamiform setae much larger than any on upper surfaces. Abdominal segments sparsely punctured, especially medially; punctures bearing conspicuous, whitish yellow, squamiform setae, some of them larger than those of upper surfaces, but smaller than those of epimera and hind coxae; intervals finely shagreened, more strongly so toward lateral margins. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment four fifths as long as second; lower ramus of tarsal claws less than half as long as upper and much finer.

Genitalia (Text-figs. 140 and 141).

FEMALE. Unknown.

Type locality: Klerksdorp, Transvaal (S.A.M.).

Other material examined from: A single example from the South African Museum, also probably from Klerksdorp.

Péringuey gives Johannesburg, Transvaal as a locality for this species.

S. compacta sp. n.

Length 12.5-13.5 mm. Breadth 6.5-8 mm.

MALE

Colour black to piceous; not very shining. *Head* with labral emargination weakly acute; anterior clypeal face reflexed, almost plane vertically, with a broad median gap in its row of setiferous punctures; clypeal carina arcuate; fronto-clypeal suture clearly marked; vertex with a clearly marked transverse carina which is, however not strongly raised; clypeal punctures elongate, their internal borders more sharply marked than other borders, punctures bearing short, golden, non-squamiform setae; frontal punctures with their antero-internal borders only sharply formed, punctures bearing setae similar to those of clypeal punctures. *Pronotum* with anterior border evenly emarginate; posterior margin without a raised hind border in front of scutellum; posterior angles obtuse; lateral borders with outstanding setae about twice as long as basal anterior tarsal segment; surface with well-marked transverse, subbasal, impunctate areas; surface elsewhere set with coarse, variably separated punctures, each containing an inverted U-shaped or M-shaped groove, or annulate, each puncture bearing a small, white, squamiform seta; a median longitudinal impunctate area usually present; intervals between punctures finely, but strongly shagreened. Scutellum broadly transverse (1 : 2); coarsely punctured, especially laterally, punctures containing inverted U-shaped

grooves or annulate, bearing squamiform setae somewhat smaller than those of pronotum; intervals finely shagreened. *Elytra* with punctures separated by considerably more than one diameter, especially toward apices; punctures bearing squamiform setae slightly smaller than those of pronotum; intervals finely, but strongly shagreened; lateral borders with stiff, outstanding setae from shoulders to level of hind coxae only; inflected lateral borders broadened medially, evanescent toward apices (Text-fig. 43). Pygidium very slightly transverse; faintly and sparsely annulate-punctate, punctures usually separated by more, often by much more than one diameter; punctures bearing small, slightly squamiform setae; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures separated for the most part by one diameter, containing inverted U-shaped grooves and bearing either short, outstanding setae or shorter, subrecumbent, squamiform setae, the latter more especially posteriorly and postero-laterally; squamiform setae considerably larger than those of upper surfaces. Abdominal segments more closely punctate laterally than medially; punctures of first four segments with small tubercles at their anterior borders, more noticeable laterally; punctures of fifth segment annulate; punctures bearing short, appressed, squamiform setae; fifth segment with long, fine setae as well as squamiform setae; intervals between punctures of abdominal segments finely shagreened, less strongly so toward midline. *Legs* with anterior tibiae tridentate; basal hind tarsal segment four fifths as long as second; tarsal claws with upper ramus considerably shorter and finer than lower.

Genitalia (Text-figs. 134 and 135).

FEMALE. Differs from the *male* by the shorter lamellae of the antennal club and by the more rounded outline of the elytra.

Holotype: A *male* in British Museum (Nat. Hist.). Van Reenen, Drakensberg, Natal 55-6500 Ft. $\times$ '26 (R. E. Turner).

Paratypes: 4 *males* and 2 *females* with same data as holotype. 1 *male* Ulundi, Natal 9. '96 (G. A. K. Marshall).

S. piceonigra sp. n. (Text-fig. 2)

Length 10.5-12.5 mm. Breadth 5.5-6 mm.

MALE

Black to piceous; dull. This species is closely related to both *S. compacta* sp. n. and *S. spuria* Pér., differing from them as indicated in the key to species. The facies of this species approach more closely those of *S. spuria* than those of *S. compacta*, but it is distinguished from the former by the more conspicuous setae of the upper and lower surfaces and by the fact that the lamellae of the antennal club are about one and one half times as long as the funicle whereas they are twice as long as the funicle in *S. spuria*.

Genitalia (Text-figs. 142 and 143).

FEMALE. I have examined two specimens, one in the Museum G. Frey and bearing the data "Johannesburg, Süd-Afrika, v. 1949 Zumpt" and another in the British Museum (Nat. Hist.), London, with the data "Int. S. Afr.", which I believe to be

the female of this species. They differ from the *males* by their more rounded form, shorter lamellae of the antennal club, relatively larger head and by having reduced, non-functional wings.

Holotype: A *male* in the British Museum (Nat. Hist.). Pretoria (Transvaal) W.L.D. (1899).

Paratypes: 1 *male* with same data as holotype. 1 *male* Pretoria 1913 (L. M. Bucknill). 3 *males* Cape Town x.96 (J. P. Cregoe). 2 *males*, 1 *female* Int. S. Afr. 43:19 [Burke]. 1 *male* Pascoe Coll. 93.60. 1 *male* Zoutsp. [Zoutpansberg] Transvaal 99:118 (Kaessner). 1 *female* Johannesb[ur]g, Süd Afrika v.1949 (Zumpt) (F.).

S. spuria Pér.

Schizonycha spuria Péringuey, 1904, p. 237.

Length 11 mm. Breadth 5.75 mm.

MALE

Colour black to piceous, not very shining. This species is very closely related to both *S. piceonigra* and *S. compacta*, but may be distinguished from them as indicated in the key to species. The male genitalia of this species are very similar indeed to those of *S. compacta*, but in the latter species the head is much broader in proportion to the pronotum than is the case with *S. spuria*.

Genitalia (Text-figs. 144 and 145).

FEMALE. Unknown.

Type Locality: Rustenburg, Lydenburg, Transvaal (S.A.M.).

Other material examined from: Transvaal: Johannesburg.

Total material seen: 3 examples.

S. pseudosquamifera sp. n.

Length 13 mm. Breadth 6.5 mm.

MALE

Colour black to piceous. *Head* with labral emargination forming an angle of 90° or slightly more; anterior clypeal face slightly convex, row of setiferous punctures interrupted medially; anterior edge of clypeus truncate medially, slightly reflexed; both clypeus and frons very closely punctured, punctures bearing conspicuous, whitish, squamiform setae; clypeal carina regularly arcuate, frontoclypeal suture distinct; basal cephalic carina indicated by a somewhat irregular row of contiguous punctures. *Pronotum* with anterior border evenly arcuate; anterior and posterior angles obtuse; lateral borders with outstanding, curved, testaceous setae longer than basal anterior tarsal segment; hind border not raised medially; surface with two narrow, transverse, subbasal, impunctate areas, one on either side of midline; punctures of disc and margins coarse, each containing an inverted U-shaped groove and bearing a conspicuous, pointed, squamiform seta, broader than those on head; discal punctures irregularly spaced, often separated by half a diameter or even less;

intervals finely, but strongly shagreened (microsculpture readily visible under $\times 20$ magnification). Scutellum transverse, squamoso-punctate laterally, squamae as on pronotum; intervals finely shagreened. *Elytra* with punctures separated by slightly more than their diameter and bearing squamiform setae similar to those on pronotum; intervals with more obvious microsculpture than pronotal intervals; lateral borders with a mixture of long, outstanding, testaceous setae and minute, slightly squamiform setae from bases to level of hind coxae, minute setae only from hind coxae to apicosutural angles. Pygidium slightly transverse, almost flat longitudinally, distinctly convex transversely; annulate-punctate, punctures separated their own diameter or less; setae in punctures smaller than those of *elytra*, with rounded apices, suberect medio-apically, elsewhere recumbent; intervals finely reticulate, less strongly so than *elytral* intervals. Metasternum, episterna and hind coxae with punctures usually annulate, a few containing an inverted, U-shaped groove, bearing either long, pale setae or very broad, conspicuous, squamiform setae, broader than any on upper surfaces, rounded apically; squamiform setae confined to postero-lateral parts of metasternum, posterior two thirds of epimera and to hind coxae, a few scattered squamae also present on metasternal disc. Abdominal segments with squamiform setae in punctures, setae broad, rounded apically, variable in size, those toward lateral margins almost as broad as metasternal squamae, setae more widely spaced and distinctly narrower toward midline; penultimate segment with a single transverse row of long bristles as well as squamae; intervals finely and faintly reticulate. *Legs* with anterior tibiae tridentate; basal hind tarsal segment almost as long as second (4 : 5); tarsal claws with lower tooth less than half as long as upper and widely divergent from it (as in Text-fig. 10).

Genitalia (Text-figs. 156 and 157).

FEMALE. Unknown.

Holotype: In British Museum (Nat. Hist.). Graaf Reinet, Cape Province 24-27.x.1931 (Ogilvie).

Paratype: Middleburg [Cape Province] Nov. 1935 (Museum Staff) (S.A.M.).

In general facies this species is very similar to *S. squamifera* Wallengren (p. 195), but the presence of setae along the base of the mentum place it in a different section of the key to species.

S. livida Klug

Schizonycha livida Klug, 1855, p. 658.

Schizonycha livida Klug, 1862, p. 257.

Schizonycha zambeziana Péringuey, 1904, p. 240 (*syn. nov.*).

Length 14 mm. Breadth 6.5 mm.

MALE

Derm dark testaceous with head and pronotum usually darker. Occasional specimens are almost fuscous. *Head* with labral emargination acute; anterior face of clypeus vertically plane, with a moderate median gap in its row of setiferous punctures; clypeal carina weakly arcuate, almost straight medially; frontoclypeal suture indistinct; vertex with a fine, but clearly raised transverse carina which has

a groove immediately behind it; clypeal punctures elongate, their internal borders sharply impressed; frontal punctures asperose. *Pronotum* with anterior border sinuate laterally, forwardly arcuate medially; anterior angles slightly oblique; posterior angles obtuse; posterior margin without a raised hind border in front of scutellum; lateral borders with outstanding setae shorter than basal anterior tarsal segment; surface with well-marked, but short, transverse, subbasal impunctate areas; discal punctures each containing an inverted U-shaped groove, somewhat asperose along anterior margin, bearing small, but conspicuous, white, squamiform setae; intervals about equal to diameter of punctures, finely shagreened. Scutellum transverse (3:4); laterally punctate; intervals finely, but much more strongly shagreened than intervals between pronotal punctures. *Elytra* with punctures separated by about one diameter and bearing setae as on pronotum; intervals with very faint microsculpture on disc, almost smooth, very strongly shagreened along lateral margins; lateral borders with outstanding setae from bases to level of second or third abdominal segment, interspersed with short, squamiform setae. Pygidium slightly transverse; sparsely and evenly annulate-punctate except for impunctate apical marginal area; punctures bearing squamiform setae similar to those on elytra; intervals finely, but quite strongly shagreened. Metasternum, metepisterna and hind coxae with punctures (except for some punctures on anterior metasternal margin and some on mediobasal metasternal area) bearing broad, squamiform setae much larger than those of upper surfaces; intervals almost smooth. Abdominal segments with punctures bearing squamiform setae of varying sizes, larger laterally than along midline; intervals finely shagreened laterally, progressively less strongly so toward midline. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment a little more than half as long as second (4:7); tarsal claws with upper ramus much finer and a little shorter than lower on middle and front legs, rami of tarsal claws of hind legs almost equal in length.

Genitalia (Text-figs. 150 and 151).

FEMALE. Similar to the *male*, but with the lamellae of the antennal club shorter and with the upper ramus of all tarsal claws almost as long as lower although more slender.

Type locality: Tete, Zambesi (Z.M.B.).

Other material examined from: S. Rhodesia: Sebakwe (S.A.M.—Type of *S. zambeziana* Pér.). Bechuanaland: Nata (F.). Port. E. Africa: Tete (Z.M.B.).

Through the kindness of Dr. Delkeskamp, I have been able to examine the material in the Zoologisches Museum, Berlin, standing over the name *S. livida* Klug. It consists of six examples, four *females* and two *males*, all bearing the number "11268". One of the *males* has had its genitalia extracted and mounted separately on a card. This specimen bears a white label with "*livida* Mihi" on it and a green label bearing the words "livens N Tette". One of the *females* bears a type label and another label inscribed "*livida* Kl. Tette". I have accepted this last example as the type of *S. livida* Klug.

I have also been able to examine the type specimen of *S. zambeziana* Pér., and there is no doubt that Péringuey redescribed *S. livida* Klug under this name.

Total material seen: 8 examples.

S. salaama Brske.

Schizonycha salaama Brenske, 1898, p. 359.

Schizonycha africana Klug (*nec* Cast.), 1862, p. 257 (*syn. nov.*).

Schizonycha africana Klug, Péringuey, 1904, p. 231.

Length 14.5–15 mm. Breadth 7–7.5 mm.

MALE

Castaneous; shining. This species is closely related to *S. abenaba* (p. 155), differing from it as explained in the key to species and in the following respects.

The frons has smaller, more closely set and less regularly shaped punctures. The *pronotum* has the anterior border quite markedly sinuate toward the anterior angles and the raised hind border in front of the scutellum is a little more coarsely constructed than it is in *S. abenaba*. The *elytra* are more closely punctured, the setae in the punctures being slightly more conspicuous. The squamiform setae of the metepisterna, the hind coxae and parts of the metasternum are broader and more conspicuous. The squamiform setae of the abdominal segments are also broader, but here the difference between the two species is not so marked. The *legs* have the basal segment of the hind tarsi nearer in length to the second segment (c. 18 : 25) than is the case in *S. abenaba* (c. 21 : 31).

FEMALE. With shorter antennal lamellae, a more transverse pygidium and with the lower ramus of all the tarsal claws about as long as the upper ramus.

Type locality: Dar es Salaam (Z.M.B.).

Other material examined from: Port. E. Afr.; Tete (type of *S. africana* Klug—Z.M.B.); Kola valley, E. of Mt. Chipirone. Nyasaland: unlocalised.

In 1862, Klug recorded the occurrence in Portuguese East Africa of *S. africana* Castelnau, a species described from Senegal. Péringuey, in 1904, saw the specimen upon which Klug had based his record and stated that he thought it might be synonymous with his own species *S. vaalensis* (= *S. fimbriata* Brske., see p. 207). I too have seen the specimen identified by Klug as *S. africana* and disagree with the findings of Péringuey. It is clearly not an example of *S. vaalensis*. It is very closely related in external appearance to *S. africana* Cast., but has the squamiform setae of the underside smaller and less readily visible than they are in the latter species.

Two *males* of *S. salaama* Brske. in the Zoologisches Museum, Berlin are conspecific with Klug's female example of *S. africana* from Tete. Klug's misinterpretation of *S. africana* Cast. is to be called *S. salaama* Brske., the first available name for the species.

S. abenaba sp. n. (Text-fig. 6)

Length 16.5 mm. Breadth 8 mm.

MALE

Derm testaceous with head and pronotum somewhat redder. *Head* with labral emargination acute; anterior clypeal face reflexed medially, vertically plane, gap in its row of setiferous punctures broad; clypeal carina strongly arcuate; frontoclypeal

suture clearly marked ; vertex of head sharply angled, but without a raised transverse carina ; clypeal punctures elongate with internal borders sharply marked ; frontal punctures obliquely transverse, their posterolateral borders not clearly marked. *Pronotum* with anterior border almost evenly emarginate ; posterior margin with a raised hind border in front of scutellum ; posterior angles obtuse, though sharply formed ; lateral border bearing outstanding setae shorter than basal anterior tarsal segment ; surface with clearly marked, transverse, impunctate subbasal areas ; discal punctures each containing an inverted U-shaped groove and bearing minute setae scarcely as long as diameter of punctures ; punctures separated by from one to four diameters, slightly scabrose anterolaterally ; intervals finely shagreened. Scutellum transverse (4.5 : 7) ; strongly punctate laterally ; punctures similar to those of pronotal disc, but shallower, bearing similar setae ; intervals finely shagreened. *Elytra* with punctures separated by from one to two diameters, bearing minute setae as on pronotum ; intervals finely shagreened ; lateral borders with outstanding, testaceous setae confined to basal half. Pygidium transverse ; strongly convex in apical half ; sparsely and shallowly annulate-punctate, punctures somewhat closer basilaterally than elsewhere, bearing minute setae as on elytra ; intervals finely shagreened. Metasternum, epimera and hind coxae sparsely setiferous, setae on all but anterior half of metasternum narrowly squamiform. Abdominal segments annulate-punctate laterally, punctures separated by from one and a half to two diameters and with their anterior borders sometimes tuberculate ; punctures usually bearing squamiform setae slightly shorter than those on hind coxae, but sometimes bearing larger, non-squamiform setae ; intervals finely shagreened. *Legs* with anterior tibiae tridentate, basal tooth well marked ; basal hind tarsal segment three fourths as long as second ; tarsal claws with upper ramus about half as broad at base as lower and slightly shorter.

Genitalia (Text-figs. 146 and 147).

FEMALE. Differs from the *male* by having shorter lamellae to the antennal club and by a flatter pygidium.

Holotype : A *male* in the South African Museum, Cape Town. Abenab, S-W. A[frika]. 1929 (J. Frampton).

Paratypes : 1 *female* Tsintsabis, S.W. Prot.[ectorate] dec. 1919 (R. W. Tucker). 4 *males* Nata, Bechuanaland xii.54 leg. Zumpt (F. and B.M. (N.H.)). 1 *male* E. Africa, Portuguese Territory ("Purchased 1898 of Mr. G. Christy." No other data). 2 *females*. Abachaus, Otiwarongo (*sic*) Distr. S-W. Afr. 11.1953 leg. G. Hobohm (B.S.S.).

This species, which further collecting may well show to have a rather wide distribution, is related to *S. salaama* Brske. (p. 155) and to *S. livida* Klug (p. 153), but differs from them as indicated in the key to species.

S. usambarae Brske (Text-fig. 5)

Schizonycha usambarae Brske., 1898, p. 362.

Schizonycha bogamoyana Brske., 1898, p. 363 (**syn. nov.**).

Length 13-16 mm. Breadth 6.5-8.5 mm.

MALE

Derm variable from testaceous to deep fuscous. *Head* with labral emargination strongly acute; anterior clypeal face reflexed medially, vertically plane; anterior edge of clypeus usually straight medially, rounded laterally to eyes; clypeal carina strongly arcuate; frontoclypeal suture well-marked; vertex sharply angled, with a weakly raised transverse carina; clypeal punctures elongate, usually separated by one transverse diameter or less; frontal punctures transverse or obliquely transverse; both clypeal and frontal punctures bearing minute, recumbent setae; intervals between coarse punctures with scattered micropunctures. *Pronotum* with anterior border strongly sinuate laterally and directed obliquely backward to strongly obtuse anterior angles; posterior margin without a raised hind border in front of scutellum; posterior angles obtuse; lateral borders with outstanding setae shorter than basal anterior tarsal segment; surface with clearly marked transverse, subbasal, impunctate areas; disc with punctures annulate or containing an inverted U-shaped groove, variably separated by from one half to two diameters; punctures frequently transverse toward lateral margins, occasionally transverse on disc also; punctures bearing small, white, scarcely squamiform setae; intervals finely and faintly shagreened. Scutellum transverse (2 : 3); lateral margins each with a single row of coarse setiferous punctures; intervals finely shagreened. *Elytra* with punctures separated by less than one diameter as a rule, bearing setae similar to those of punctures on pronotal disc; intervals smooth, or with faint shagreening; lateral borders with stiff, outstanding setae from bases to within at least one third of the distance between bases and apical borders, sometimes from bases to apices, setae diminishing in length from shoulders toward apices; apical borders set with minute setae, smaller than those of elytral disc in some instances. Pygidium transverse (c. 6 : 8); strongly convex; annulate-punctate, punctures variably separated by from less than one to two or more diameters; setae in punctures minute, about as long as the diameter of a puncture; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures separated by more or less one diameter and bearing either long fine, setae, or shorter, white, narrowly squamiform setae larger than those of upper surfaces; squamiform setae restricted to posterolateral parts of metasternum, all but the anterior margins of the episterna and to the external margins of the hind coxae. Abdominal segments sparsely annulate-punctate, especially medially where punctures are reduced to a single transverse row and a few scattered punctures across each segment; punctures toward and along lateral margins separated by from one to about two diameters, bearing short, white, appressed setae varying in length from one to about two puncture diameters; transverse row of punctures across each segment bearing longer, more or less outstanding, yellowish setae; intervals between punctures finely shagreened. *Legs* with anterior tibiae tridentate; basal hind tarsal segment about three fourths as long as second; tarsal claws with upper ramus of anterior legs shorter and distinctly finer than lower, upper ramus of those of middle and hind legs slightly finer than lower as a rule, but almost equally long.

Genitalia (Text-figs. 154 and 155).

FEMALE. Very similar to the male, but with slightly shorter lamellae to the antennal club and with the pygidium flat or slightly concave longitudinally while remaining strongly convex transversely.

Type locality: Dar es Salaam (Z. M. B.).

Other material examined from: Transvaal: Blaauwburg; Barberton; Zoutpansberg district; Rustenberg; Tzaneen. S. Rhodesia: Lomagundi (D.A.S.R.); Bulawayo. Mozambique: Nyassa. Nyasaland: Dowa district. Tanganyika Terr.: Tanga Province; Bagamoyo (Z. M. B.) (type of *S. bogamoyana* Brske.); Usambara (Z. M. B.). Zanzibar.

Total material seen: 17 examples.

Through the kindness of Dr. Delkeskamp of the Zoologisches Museum, Berlin, I have been permitted to examine the type specimens of *S. bogamoyana* and *S. usambarae*. There is no doubt that they are examples of a single species. The name *usambarae* is here selected as the correct name for the species as it has page priority over *S. bogamoyana*.

S. continens Pér.

Schizonycha continens Péringuey, 1904, p. 214.

Length 12.25–13 mm. Breadth 6.25–6.5 mm.

MALE

Colour pale castaneous with head and pronotum darker. *Head* with labral emargination acute; anterior clypeal face almost plane vertically, with a median gap in row of setiferous punctures; anterior edge of clypeus truncate medially, slightly reflexed; clypeal carina arcuate, strongly raised; frontoclypeal suture distinct; basal cephalic carina irregularly raised, bordered behind by a row of punctures; clypeal punctures elongate; frontal punctures closely set, irregular, slightly scabrous; both clypeal and frontal punctures bearing small, white, squamiform setae. *Pronotum* (Text-fig. 40) with anterior border almost evenly curved, sometimes feebly arcuate medially; anterior and posterior angles obtuse; hind border not raised medially; crenulate lateral borders with stiff, outstanding setae shorter than basal anterior tarsal segment; surface with very narrow, transverse, subbasal, impunctate, declivous areas; disc with large, deep punctures, usually separated by less than one diameter and containing an inverted U-shaped groove; each puncture bearing a white, squamiform seta slightly larger and more conspicuous than those on head; intervals smooth. Scutellum transverse, annulate-punctate, punctures bearing setae similar to those in pronotal punctures; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, bearing squamiform setae similar to, but sometimes slightly smaller than those of pronotum, intervals almost smooth, shining; lateral borders with sparse, outstanding, testaceous setae, diminishing in length from bases to level of hind coxae, replaced by minute, whitish setae behind this point. Pygidium slightly transverse, annulate-

punctate with punctures separated by about their own diameter and bearing short, outstanding setae slightly smaller than those of elytra ; intervals finely and faintly shagreened. Metasternum, episterna and hind coxae with setae and squamiform setae in punctures, punctures on anterior and posteromedian areas of metasternum bearing long, suberect, pale testaceous setae, elsewhere with punctures bearing appressed, white, squamiform setae, distinctly larger than those of upper surfaces ; episterna with long setae as well as squamae on anterior third. Abdominal segments each with a single, transverse row of setiferous punctures accompanied laterally by other punctures bearing white, squamiform setae, similar to, or slightly larger than those of elytra ; intervals almost smooth, faintly and finely wrinkled laterally. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment about two thirds as long as second ; tarsal claws with upper ramus as broad at base as and slightly longer than lower, broadly emarginate beneath apex.

Genitalia (Text-figs. 164 and 165).

FEMALE. Very similar to *male*, but has a shorter antennal club, has the hind tibial spurs with a length ratio of less than 2 : 1 and the upper ramus of the tarsal claws is distinctly longer than the lower.

Type locality : Barberton, Transvaal (S.A.M.).

Other material examined from : Transvaal : Barberton. Cape Province : Cape Peninsula.

Total material seen : 3 examples.

Péringuey also records Waterburg, Lydenburg, Pretoria in the Transvaal and Bulawayo in S. Rhodesia as localities for this species.

S. mimocontinens sp. n. (Text-fig. 44)

Length 12-13.5 mm. Breadth 6-7 mm.

MALE

Very closely allied to *S. continens* Pér. (p. 158), the description of the latter species applying equally well to the present insect except for the characters referred to in the key to species.

Genitalia (Text-figs. 158 and 159).

FEMALE. Slightly broader than the *male*, with shorter lamellae to the antennal club and with the length-ratio of the apical spurs of the hind tibiae much less than 2 : 1, otherwise almost indistinguishable from the *male*.

Holotype : A *male* in the British Museum (Nat. Hist.). Barberton, Transvaal (Rendall) (no date).

Paratypes : 4 *males* with same data as the holotype. 1 *male* Barberton, Transvaal 31.10.1926 (Taylor). 2 *males* Nelspruit, nr. Barberton, Transvaal Jan. 1939 (R. F. Lawrence) (S.A.M.). 1 *male* Mbabane, Swaziland July 1938 (R. F. Lawrence) (S.A.M.). 1 *male* and 2 *females* Cape Peninsula (S.A.M. and B.M. (N.H.)). 2 *males* Mkuzi, Zulu.[land] [Natal] Dec. 1946 light trap (Div. Ent.).

S. neglecta Boh.*Schizonycha neglecta* Boheman, 1857, p. 101.*Schizonycha plausibilis* Péringuey, 1904, p. 223 (*syn. nov.*).*Schizonycha consueta* Péringuey (*nec* Kolbe), 1908, p. 700 (*syn. nov.*).

Length 14–17 mm. Breadth 7–10 mm.

MALE

Colour testaceous to castaneous with head and pronotum darker. *Head* with labral emargination strongly acute; anterior clypeal face almost plane, a median gap present in its row of setiferous punctures; anterior edge of clypeus almost straight medially; clypeal carina evenly arcuate; frontoclypeal suture distinct; basal cephalic carina not strongly raised, bordered posteriorly by an irregular row of transversely confluent punctures; clypeal punctures slightly elongate; frontal punctures scabrose laterally; setae in clypeal and frontal punctures minute, white, recumbent. *Pronotum* with anterior border sinuate toward anterior angles; anterior and posterior angles obtuse; hind border not raised medially; lateral borders with stiff, outstanding setae slightly shorter than basal anterior tarsal segment; surface with two clearly indicated, transverse, subbasal, impunctate areas, one on either side of midline and with, in some examples, a vaguely indicated longitudinal median impunctate space; disc with punctures containing an inverted U-shaped groove and bearing white, narrowly squamiform setae, very slightly more conspicuous than those on head; punctures separated by one diameter or more as a rule, scabrose along anterior margin; intervals finely and faintly shagreened. *Scutellum* transverse, punctate laterally, punctures with setae as on pronotum; intervals faintly and finely shagreened. *Elytra* with punctures separated by their own diameter or a little more, bearing setae similar to those of pronotum; intervals almost or quite smooth; lateral borders with a mixture of long, outstanding, testaceous setae and minute, white setae from bases to level of hind coxae, with sparsely set, minute, white setae thence to apical borders. *Pygidium* transverse; variably convex; punctures separated by about one diameter or more, annulate or almost so, each with a minute, white, squamiform seta similar to those of elytra; intervals variable, sometimes finely and faintly shagreened, sometimes almost smooth. *Metasternum*, *episterna* and hind coxae variably setoso-punctate; metasternum with larger, squamiform setae—about twice as long and twice as broad as those of elytra—posterolaterally, elsewhere with long, fine, yellowish-white bristles; *episterna* for the most part with squamiform setae as on metasternum, a few long bristles also present on anterior half; hind coxae set with squamae as on metasternum except posteromedially where squamae are replaced by long, yellowish-white setae. *Abdominal segments* with punctures toward lateral margins bearing squamiform setae intermediate in size between those of metasternum and those of elytra; punctures toward midline very sparse, a single transverse row on each segment bearing long bristles, the remainder with minute, almost white setae; intervals with traces of fine shagreening toward lateral margins, almost smooth medially. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment two thirds as long as second; tarsal claws with lower ramus about two thirds as long as upper

and slightly less robust, upper ramus emarginate beneath apex; the shorter of the two apical spurs of the hind tibiae less than half as long as the other.

Genitalia : (Text-figs. 160 and 161.)

FEMALE. The smaller length-ratio of the apical spurs of the hind tibiae and the slightly shorter lamellae of the antennal club distinguish the *female* from the *male* of this species.

Type locality : "Prope fluvium Gariep" (N.H.R.M.).

Other material examined from : Cape Prov. : Umtata ; "Cape of Good Hope" ; Port St. John, Pondoland ; Transkei (type of *S. consueta* Pér. and other examples) (S.A.M. and B.M. (N.H.)). Natal : Indaleni Dist., Richmond (B.M. (N.H.) and F.) ; Estcourt ; Malvern ; Weenen ; New Hanover ; "Natal" (F.) ; Southbroom ; Melmoth, Zululand ; Durban (type of *S. plausibilis* Pér.) (S.A.M.). Transvaal : Middelfontein, nr. Nylstroom. S. Rhodesia : Bulawayo (F.).

Total material seen : 50 examples.

There are six specimens in the Boheman collection bearing the name *S. neglecta* Boh. Of these, four bear the data "Ovambo De Vylder". As De Vylder did not visit S. Africa until 1871 and as Ovamboland is in S-W. Africa, these specimens cannot belong to the original series from which the species was described in 1857. Of the two other specimens, one bears the data "Damara Africae". This again is in S-W. Africa and would not have been referred to by Boheman as "Prope fluvium Gariep". The four Ovambo specimens and the example from Damara are all of *S. puncticollis* Boh. (p. 164), a species erroneously synonymized with *S. neglecta* Boh. by Péringuey.

The sixth example with the name *S. neglecta* bears the data "Caffraria J. Wahlb. [erg.] Type "TYPUS". This specimen agrees well with Boheman's description of *S. neglecta*. Much of the material referred to in the *Insecta Caffrariae* was collected by Wahlberg and there is thus no evidence that this last example is not of the series upon which Boheman based his description of *S. neglecta*. This sixth example is here accepted as the type of the species; the description given above and the synonymy is based upon it.

I have been able to examine the type specimens of Péringuey's two species, *S. plausibilis* and *S. consueta* and there is no doubt that they are conspecific with *S. neglecta* Boh. Péringuey presumably interpreted *S. neglecta* Boh. from one of the five specimens misidentified in the Boheman collection and referred to above. Thus he was led into the error of redescribing the true *neglecta* under a new name.

Kolbe (1895, *Stett. Ent. Zeit.* 56 : 356), described a *S. consueta* from east Africa. Dalla Torre in the *Coleopterorum Catalogus* (pars. 49, p. 152) records *S. consueta* Pér. in such a way as to make it appear that Péringuey was redescribing Kolbe's species. In fact it is clear that he was describing what he believed to be a new species as he made no reference to Kolbe at the time.

S. Scabiosa Pér.

Schizonycha scabiosa Péringuey, 1904, p. 246.

Length 14-15.5 mm. Breadth 6.75-7.75 mm.

MALE

Castaneous, unicolorous. *Head* with labral emargination rightangled or slightly acute; anterior clypeal face slightly convex vertically, with a moderate median gap in its row of setiferous punctures; anterior edge of clypeus straight medially, broadly rounded laterally; clypeal carina arcuate, not always very strongly so; frontoclypeal suture visible; vertex sharply angled, with a vaguely indicated transverse carina; clypeal punctures slightly elongate, their inner borders only sharply formed, bearing laterally directed setae not much longer than the diameter of a puncture; frontal punctures transverse or obliquely transverse, closely-set, slightly scabrose, bearing small setae hardly larger than those of clypeus. *Pronotum* (Text-fig. 39) with anterior border sinuate laterally but not directed obliquely backward toward anterior angles; posterior angles obtuse; posterior margin without a raised hind border in front of scutellum; lateral borders set with stiff, outstanding, testaceous setae a little shorter than basal anterior segment; surface as a rule with very narrow, transverse, subbasal impunctate areas; discal punctures separated by more or less one diameter, each containing an inverted U-shaped groove and bearing a small, white, narrowly squamiform seta slightly longer in most cases than the diameter of its puncture; punctures usually more closely set along anterior margin; intervals between punctures finely shagreened. Scutellum transverse (3:4); punctate laterally; setae in punctures usually larger and more conspicuous than those of pronotum; intervals finely shagreened. *Elytra* with punctures separated by their own diameter or a little less, bearing setae similar to those of pronotal disc; intervals between punctures almost smooth; lateral borders with outstanding setae from bases to about level of fourth abdominal segment, setae thence to apicosutural angles minute, scarcely discernible. Pygidium transverse (3:4); convex; annulate-punctate, punctures separated by more or less one diameter and bearing setae similar to those of elytra; intervals finely and faintly shagreened as a rule. Metasternum, episterna and hind coxae setoso-punctate; setae in metasternal punctures principally long, subrecumbent, deep yellow hairs, a few white, appressed, squamiform setae often present posterolaterally; met-episterna with long yellow setae anteriorly and internally, punctures along external margin and on posterior half usually bearing large, white, appressed, squamiform setae as well as a few yellow hairs; punctures of hind coxae bearing long, fine, yellow setae except anterolaterally where they are squamiform as on epimera. Abdominal segments with coarse, annulate punctures along lateral margins separated by about their own diameter; punctures on discs of segments separated by more, sometimes by as much as two diameters; each segment with a more or less irregular row of outstanding hairs across it; other punctures bearing white, squamiform setae which are progressively more conspicuous from middle toward lateral margins; intervals finely shagreened along extreme lateral margins, almost smooth elsewhere. *Legs* (Text-fig. 46) with anterior tibiae tridentate, the basal tooth occasionally rather feebly produced; basal hind tarsal segment between one half and two thirds as long as the second; tarsal claws of anterior legs with upper ramus shorter and finer

than lower ; claws of middle and hind legs with upper ramus longer than lower and emarginate beneath apex.

Genitalia (Text-figs. 162 and 163).

FEMALE. Unknown.

Type locality : Péringuey records it as Uitenhage (Cape Province). The label on the type specimen narrows this down to Dunbrody which is near Blue Cliff in southern central Cape Province (S.A.M.).

Other material examined from : " Pr. b. Sp. Krebs " (Z.M.B.). " Capland " (coll. Staudinger) (F.).

Total material seen : 3 examples.

***S. kochi* sp. n.**

Length 13-14 mm. Breadth 6.5-7 mm.

MALE

This species is very closely related to both *S. mimocontinens* (p. 159) and *S. continens* (p. 158), scarcely differing from them other than by the characters referred to in the key to species and in the following particulars : the punctures of the pronotal disc are usually more widely separated and the derm is generally darker and with a more noticeably red tone.

Genitalia (Text-figs. 152 and 153).

FEMALE. Very similar to the *male* but for the shorter lamellae of the antennal club and for the fact that the apical spurs of the hind tibiae have a length-ratio of much less than 2 : 1.

Holotype : A *male* in the Museum G. Frey, Munich. Mooisplaats, Östl. Transvaal xi.49 Leg. C. Koch.

Paratypes : 1 *male*, 5 *females* with same data as the holotype (F. and B.M. (N.H.)). 1 *male* Pretoria (W.L.D.) (Distant Coll.). 1 *male* Pretoria 31.10.05 (no collector). 1 *female* Potschefstroom, Transvaal 1.1952 Leg. C. Koch. (F.).

***S. matabelana* Pér.**

Schizonycha matabelana Péringuey, 1908, p. 679.

Length 9 mm. Breadth 5 mm.

MALE

Derm pale testaceous with head and pronotum darker. *Head* with labral emargination acute ; anterior face of clypeus slightly reflexed medially, feebly convex vertically, with a broad median gap in its row of setiferous punctures ; clypeal carina strongly arcuate ; frontoclypeal suture clearly visible medially, following line of clypeal carina laterally ; vertex with a fine, clearly raised transverse carina ; clypeal punctures elongate, their internal borders raised ; frontal punctures with their anterior borders tuberculate. *Pronotum* with anterior border strongly

sinuate laterally, directed obliquely backward to anterior angles; posterior angles strongly obtuse, very briefly rounded; posterior margin with a strongly raised hind border in front of scutellum; outstanding setae along lateral borders scarcely more than half as long as basal anterior tarsal segment; surface with broad transverse, subbasal, impunctate areas; discal punctures coarse, weakly asperose, each containing an inverted U-shaped groove and bearing a small, white, squamiform seta; punctures separated by about one diameter, more strongly asperose along anterior margin than on disc; a row of non-asperose punctures present along hind margin close to hind border; intervals smooth, shining. Scutellum transverse (5:7); set with coarse, annulate punctures on basal half; apical half impunctate; intervals finely shagreened. *Elytra* with punctures separated by about one diameter, bearing more narrowly squamiform setae than pronotal punctures; intervals slightly irregularly raised; lateral borders set with outstanding setae for basal two thirds. Pygidium transverse; annulate-punctate, punctures separated by about one diameter toward base, more sparsely arranged toward apex, bearing fine, outstanding setae; intervals finely and faintly shagreened. Metasternum with fine setae anteriorly, with squamiform setae in punctures posteriorly and posterolaterally; metepisterna with squamiform setae in punctures; punctures of hind coxae also bearing squamiform setae; setae on hind coxae smaller than squamiform setae of metasternum, setae of metepisterna smaller than those of hind coxae; intervals between punctures of metasternum, episterna and hind coxae smooth. Abdominal segments sparsely punctured medially, punctures separated by more or less their own diameter toward lateral borders, bearing fine, slightly squamiform setae; intervals finely shagreened, more faintly so toward midline. *Legs* with anterior tibiae tridentate, basal tooth rather feebly marked; basal hind tarsal segment two thirds as long as second; tarsal claws with upper ramus about half as broad at base as lower and distinctly shorter.

Genitalia (Text-figs. 148 and 149).

FEMALE. Unknown.

Type locality: Plumtree, S. Rhodesia (S.A.M.).

The holotype is the sole example of this species known to me.

S. puncticollis Boh.

Schizonycha puncticollis Boheman, 1857, p. 98.

Schizonycha puncticollis Boh., Péringuey, 1904, p. 222.

Schizonycha neglecta Péringuey (*nec* Boh.), 1904, p. 222.

Length 11.5–15 mm. Breadth 5.5–8 mm.

MALE

Colour varying from reddish-testaceous to dark red-brown. *Head* with labral emargination strongly acute; anterior clypeal face slightly convex vertically, with or without a small median gap in its row of setiferous punctures; anterior edge of clypeus variable, rounded or straight medially; clypeal carina arcuate and usually

angulate medially; basal cephalic carina feebly marked or absent; frons often shorter than clypeus in midline; clypeal punctures elongate; frontal punctures irregular in outline. *Pronotum* with anterior border sinuate; anterior and posterior angles obtuse; lateral borders not or very feebly crenulate; hind margin with an entire raised hind border between hind angles; disc set with transversely crescentic punctures which are progressively more closely set and slightly scabrose toward anterior margin; two transverse, subbasal, impunctate areas present; setae in punctures minute, scarcely squamiform except toward anterior angles; intervals between punctures almost smooth except for micropunctures. Scutellum with a varying number of punctures, each containing a minute seta similar to those of pronotal disc; intervals finely and faintly shagreened. *Elytra* with annulate punctures separated by their own diameter or slightly more, each with a squamiform seta slightly larger than those of pronotum; intervals smooth except for micropunctures; setae along lateral borders long and outstanding near bases, much shorter and inconspicuous behind level of hind coxae. Pygidium usually with close-set, annulate punctures, each bearing a small, slightly squamiform seta; intervals finely shagreened, sometimes irregularly raised. Metasternum, episterna and hind coxae closely punctured except for metasternal disc; setae in punctures sparse, fine except on episterna and posterolateral parts of metasternum where they are replaced by long, pointed, squamiform setae, much larger than any on upper surfaces; intervals finely, often faintly shagreened. Abdominal segments scabropunctate laterally and except for the penultimate segment which is quite closely punctured even in the middle, almost impunctate medially; most punctures bearing large, squamiform setae similar to those of metasternal epimera, but some, especially on penultimate segment, bearing long, outstanding, non-squamiform setae; intervals usually finely shagreened, but in some examples this is very difficult to see. *Legs* with anterior tibiae tridentate; basal hind tarsal segment almost or quite as long as the one following; tarsal claws with upper ramus as broad as lower and longer.

Genitalia (Text-figs. 172 and 173).

FEMALE. Very similar to the *male* but the lamellae on the antennal club are slightly shorter and the pygidium is less convex.

Type locality: "Near the Orange River" (N.H.R.M.).

Other material examined from: S-W. Africa: Tsumeb; Grootfontein; Otjimbingbe; Otjikondo; Nuragas; Reheboth; Windhoek (F.); Okahandja (B.S.S. and B.M. (N.H.)); Otjiwarongo (B.S.S. and B.M. (N.H.)); Omaruru; Zesfontein; Kamanyab; Mala; Ombombo; Outjo; Gobabis; Sissekab; Voitgrund; Otjikata Lake; Erundu; Satansplatz; Hoffnung; Swakop (N.H.R.M.). Bechuanaland: Ngami (F.); Tsane (F.); Moliwa Reserve (F.); Kanyu (F.); Sekhuma (F.); Ghanzi; Mongolatsila. Transvaal: Potgietersrust; Waterberg (F.); Naboomspruit (F.); Pretoria (F.); Kruger National Park (F.); Pienaars River. Natal: Weenen.

Total material seen: Upwards of 160 examples.

Through the kindness of Prof. Malaise of Stockholm, I have been able to examine the five specimens in the Boheman collection bearing the name *S. puncticollis*. They are all of one species and agree with the original description of *S. puncticollis*.

One of them bears the data "Caffraria J. Wahlb. 86" and a red "Allotypus" label. Of the other four specimens, all of which bear the data "Svakoop Africae, J. Wahlb.", one has a small white label attached bearing the word "Type". Boheman gives the distribution of *S. puncticollis* as "In regione fluvii Gariepensis" and so it is unlikely that he had the Svakoop material before him when making the description. This being so, the "Type" label must be regarded as a later addition, even though it may have been attached by the author, and so cannot be taken as an indication that the specimen bearing it is the holotype of the species.

The "Caffraria" specimen on the other hand is almost certainly one that Boheman saw when describing *S. puncticollis*. It agrees with the description of the species and could well have been taken by Wahlberg in the region of the Orange River. I therefore propose that this specimen be regarded as the lectotype of *S. puncticollis* Boheman and I have labelled it accordingly.

Péringuey considered *S. puncticollis* Boh. and *S. neglecta* Boh. to be synonymous, choosing to accept *S. neglecta* as the valid name for the species. He was able to see part of the Boheman series of *S. puncticollis* and, as it is all of one species, interpreted the species correctly. As is stated on p. 161, the series labelled *S. neglecta* in the Boheman collection includes two species, the true *S. neglecta* and *S. puncticollis*. One of the latter bears a label on Péringuey's handwriting and has had its genitalia dissected and mounted in a manner characteristic of that author. This specimen is clearly the entity upon which he based his interpretation of the Boheman species *S. neglecta* and it is thus obvious how he came to synonymize *S. neglecta* and *S. puncticollis*. The true *S. neglecta* Boh. is redescribed on p. 160 of the present work and *S. neglecta* Péringuey (*nec* Boheman) is a synonym of *S. puncticollis* Boheman as is recorded above.

S. ovampoana Pér.

Schizonycha ovampoana Péringuey, 1904, p. 236.

Length 14.5 mm. Breadth 7 mm.

MALE

Derm testaceous with head and pronotum darker. *Head* (Text-fig. 24) with labral emargination acute; anterior clypeal face strongly reflexed, not convex vertically, gap in its row of setiferous punctures very broad; clypeal carina strongly arcuate, bluntly angled medially; fronto-clypeal suture clearly visible medially; basal cephalic carina not raised, head sharply angled at vertex; clypeal punctures elongate, their internal borders sharply impressed; frontal punctures round, discrete, more closely set posterolaterally than elsewhere. *Pronotum* with anterior border weakly sinuate toward anterior angles; posterior margin with a raised hind border in front of scutellum; posterior angles sharply formed; lateral borders with setae sometimes as long as or longer than basal anterior tarsal segment; surface with narrow, not entirely impunctate, transverse, subbasal declivities; discal punctures annulate, irregularly separated by from one to several diameters, punctures similarly separated toward anterior margin; punctures bearing minute setae shorter than

the diameter of a puncture; intervals finely shagreened. Scutellum transverse (5:7); punctures annulate except mediobasally, bearing setae as in pronotal punctures; intervals finely shagreened. *Elytra* with punctures separated by more than one diameter, by considerably more in many parts, bearing minute setae as on pronotum; intervals finely shagreened; lateral borders with stiff, outstanding setae from bases to apical borders. Pygidium transverse; feebly convex; shallowly annulate-punctate, punctures variably separated, sometimes by less than one diameter, bearing minute setae as on pronotum; intervals finely shagreened. Metasternum, episterna and hind coxae with fine, non-squamiform setae in punctures. Abdominal segments sparsely punctate medially, more closely so toward lateral borders, punctures bearing either long and outstanding, or short, slightly squamiform setae; intervals finely shagreened. *Legs* with anterior tibiae tridentate, third tooth small, but distinct; basal hind tarsal segment slightly more than half as long as second; upper ramus of tarsal claws slightly shorter than lower and about half as broad.

Genitalia (Text-figs. 168 and 169).

FEMALE. Unknown.

Type locality: Omuramba Uamatako, Ovamboland (S.A.M.).

Other material examined from: Lonely Mine, Matabeleland.

Total material seen: 2 examples.

S. profuga Pér.

Schizonycha profuga Péringuey, 1904, p. 213.

Length 14-16 mm. Breadth 7-9 mm.

MALE

Derm castaneous. *Head* with labral emargination rectangular or slightly obtuse; anterior clypeal face almost plane vertically, gap in its row of setiferous punctures sometimes partly bridged by non-setiferous punctures; clypeal carina arcuate; frontoclypeal suture distinct; clypeal punctures longitudinally elongate; frontal punctures irregularly shaped; basal cephalic carina usually very strongly raised. *Pronotum* (Text-figs. 9 and 38) with anterior border strongly sinuate, anterior angles oblique; posterior margin with raised hind border sometimes almost entire between hind angles; lateral borders with stiff, outstanding setae as long as basal anterior tarsal segment; discal punctures each containing an inverted, U-shaped groove and bearing a minute, inconspicuous seta; punctures becoming somewhat scabrose anteriorly and anterolaterally; intervals smooth. Scutellum almost equilateral; punctures more or less confined to lateral areas; intervals finely shagreened. *Elytra* with punctures usually separated by less than their own diameter and containing an inconspicuous seta; intervals smooth, or almost so; lateral borders with stiff, outstanding setae from bases almost to apical borders. Pygidium transverse; annulate-punctate; intervals variable, but frequently smaller than puncture diameter and finely and faintly shagreened; punctures bearing setae similar to

those of elytra. Metasternum, episterna and hind coxae set with long, non-squamiform setae, especially anteriorly; punctures usually separated by one diameter or more. Abdominal segments setoso-punctate, slightly more closely so laterally where punctures are separated by about their own diameter; setae in punctures larger than those of upper surfaces, but fine and non-squamiform; intervals finely shagreened laterally. Legs with anterior tibiae strongly tridentate; basal hind tarsal segment distinctly shorter than the one following; tarsal claws with upper ramus distinctly longer than lower.

Genitalia (Text-figs. 176 and 177).

FEMALE. Very similar to the *male*, but with slightly shorter lamellae to the antennal club, with the basal segment of the hind tarsi as long as the second segment and with the upper ramus of the tarsal claws only slightly longer than the lower.

Type locality: Sebakwe, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Salisbury (S.A.M., D.A.S.R. and B.M. (N.H.)); Umtali; Mt. Chirinda; Trelawney (D.A.S.R.); Norton (D.A.S.R.); Sebungwe (D.A.S.R.). S-W. Afr.: Tsumeb (S.A.M.). Port. E. Afr.: Delagoa Bay (F.); Nyassa; "Mozambique". Nyasaland: Blantyre (S.A.M.).

Total material seen: 36 examples.

S. livada n. n.

Schizonycha valida Péringuey (*nec* Boh.), 1904, p. 224.

Length 12–20 mm. Breadth 6–10 mm.

MALE

Colour variable from pale yellow-testaceous to castaneous or medium brown, head and pronotum usually darker than elytra. Head with labral emargination strongly acute; anterior clypeal face vertically convex, with a clear median gap in its row of setiferous punctures; anterior edge of clypeus straight or almost so medially, broadly rounded toward eyes; clypeal carina arcuate medially, overlying fronto-clypeal suture laterally; vertex with a clearly visible transverse carina; clypeal punctures elongate; frontal punctures transverse or obliquely transverse, usually asperose; clypeal and frontal punctures bearing minute setae, those toward lateral margins of frons larger and more conspicuous than those elsewhere. Pronotum with anterior border strongly sinuate laterally, sloping obliquely backward to anterior angles; posterior angles obtuse; posterior margin with an entire, or almost entire raised hind border between hind angles; lateral borders with outstanding setae longer than basal anterior tarsal segment; surface usually with clearly-marked, transverse, subbasal, impunctate areas; disc set with slightly transverse punctures, each containing an inverted U-shaped groove and bearing a small, almost white, narrowly squamiform seta which arises from a minute, backwardly directed tubercle on the middle of the anterior border of each puncture; setae about as long as the diameter of a puncture; punctures scarcely more closely set anteriorly and antero-laterally, but usually asperose; intervals finely shagreened, sometimes faintly so. Scutellum transverse (c. 7:9); punctate laterally; punctures similar to those of

pronotum and bearing similar setae; intervals finely shagreened. *Elytra* with punctures separated by about one diameter, bearing setae similar to or a little larger than those of pronotal disc; intervals finely shagreened; lateral borders with outstanding setae from bases to level of fourth or fifth abdominal segment. Pygidium transverse (7 : 9); more strongly convex transversely than longitudinally; annulate-punctate, punctures separated by from less than one to about two diameters over most of pygidium, more sparsely arranged apically and sometimes apicolaterally as well; punctures bearing setae similar to those on elytra; intervals finely shagreened. Metasternum, episterna and hind coxae densely set with long, fine, pale yellowish setae, a few setae of posterolateral parts of metasternum, episterna and lateral margins of hind coxae sometimes white and narrowly squamiform. Abdominal segments much more faintly punctured medially than laterally; each segment with a more or less regular row of punctures across it bearing subrecumbent yellow setae, other punctures on segments bearing small, appressed, white, narrowly squamiform setae, those along lateral margins usually distinctly larger than setae on elytra, those toward midline no larger than elytral setae, frequently smaller; intervals finely and faintly shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment about two thirds as long as second; tarsal claws with upper ramus distinctly longer than lower and shallowly emarginate beneath apex, lower ramus obliquely truncate apically (Text-fig. 11).

Genitalia (Text-figs. 166 and 167).

FEMALE. Very similar to the *male*, but with much shorter lamellae to the antennal club, with less disparity between the lengths of the basal and succeeding segments of the hind tarsi and with a more bulbous abdomen.

Type locality: "Damara" (N.H.R.M.) (see p. 174).

Other material examined from: Cape Prov.: Kimberley. Transvaal: Potchefstroom (F.); Potgietersrust (F.); Letaba River (F.); Pretoria (Div. Ent. and B.M. (N.H.)); Zoutpansburg; Rustenburg; Middelfontein, nr. Nylstroom. Natal: Mkuzi, Zululand (Div. Ent.). Bechuanaland: Gaberones (F.); unlocalized. S-W. Africa: Sissekab; Otavifontein; Otjiwarongo (S.A.M.); Otjimbumbé (S.A.M.); Kaoko Otavi (S.A.M.); Grootfontein (S.A.M.) Swaziland: nr. Bremersdorp. Port. E. Afr.: Upper Buzi River; Delagoa Bay; Boana; Lourenço Marques. S. Rhodesia: Victoria; Salisbury; Matopo Hills. Nyasaland: "Nyasa" (no more detailed locality). Tanganyika Territory: Dodoma; unlocalized. Also "Caffraria" (N.H.R.M.) (see p. 176).

Total material seen: More than 68 examples.

Péringuey records the following additional localities: Transvaal: Klerksdorp; Waterberg. S. Rhodesia: "Neighbourhood of the Zambezi River."

The true *S. valida* of Boheman is redescribed on p. 172 of this paper.

S. citima Pér.

Schizonycha citima Péringuey, 1904, p. 225-1908, p. 702.

Length 15-17 mm. Breadth 7-8.5 mm.

MALE

This species is so closely related to the very variable *S. livada* that I have not found any reliable means of separating the two other than examination of the *male* genitalia. These seem to show a quite consistent difference.

The size range of *S. citima* appears to be more restricted than that of *S. livada* but this may well be an illusion created by lack of material.

Genitalia (Text-figs. 170 and 171).

FEMALE. It has not proved possible to separate the *female* of this species from that of *S. livada* other than by association.

Type locality : Manica, Rhodesia (S.A.M.).

Other material examined from : S. Rhodesia : Salisbury ; Sebakwe (S.A.M.) ; Trelawney (D.A.S.R.) ; Hartley (D.A.S.R.) ; unlocalized (Nevinson coll., B.M. (N.H.)). Port. E. Africa : Caia ; Mozamb. Nyassa. Nyasaland : Mlanje ; Zomba ; unlocalized.

Total material seen : 17 examples.

In his second contribution to the knowledge of *S. citima*, Péringuey refers to the extreme variability of the species and correlates this with geographical variation. I cannot confirm Péringuey's observations on geographical variation but it is quite obvious that the species is a variable one. At the same time as making these remarks Péringuey also quotes the following fresh localities for *S. citima* :

S. Rhodesia : Plumtree. Transvaal : Nylstroom. Bechuanaland : Vryburg. Orange Free State : Bothaville.

S. salisburiana Pér.

Schizonycha salisburiana Péringuey, 1904, p. 241.

Atys hypocrita Péringuey, 1904, p. 257 (*syn. nov.*).

Length 13.5–15.25 mm. Breadth 6–7 mm.

MALE

Derm castaneous with head and pronotum darker. *Head* with labral emargination almost rightangled ; anterior clypeal face reflexed medially, vertically convex, with a broad median gap in its row of setiferous punctures ; clypeal carina angulate medially, strongly raised ; frontoclypeal suture distinct medially, following line of clypeal carina toward lateral borders ; vertex with a strongly raised transverse carina across middle, carina less strongly raised near eyes ; clypeal punctures slightly elongate, their internal borders sharply formed ; frontal punctures more closely set than those of clypeus, irregularly formed, asperose laterally. *Pronotum* with anterior border strongly sinuate laterally, directed obliquely backward to anterior angles ; posterior angles strongly obtuse ; posterior margin with a strongly raised hind border in front of scutellum ; lateral borders with outstanding setae about as long as basal anterior tarsal segment ; surface with well-marked transverse, subbasal, impunctate areas laterally ; disc set with punctures of varied separation, each containing an M-shaped groove and bearing a minute, inconspicuous seta ; punctures strongly asperose along anterior margin ; intervals finely shagreened. Scutellum

transverse (3:4); variably punctate laterally; punctures annulate or containing an inverted U-shaped groove and bearing minute setae; intervals finely shagreened. *Elytra* with punctures separated by about one diameter, bearing minute setae as on scutellum; intervals almost smooth; lateral borders with outstanding setae from bases to level of penultimate abdominal segment. Pygidium transverse; weakly convex; punctures circular, sometimes separated by less than one diameter basally, by considerably more toward apical border; setae in punctures short, slightly squamiform, but outstanding; intervals finely shagreened. Metasternum, episterna and hind coxae with long, outstanding, non-squamiform setae in most punctures, large, squamiform setae in some, particularly on metepisterna. Abdominal segments almost impunctate medially, pluripunctate laterally, punctures here separated by more or less one diameter, annulate, bearing setae similar to those of metasternum or, in many instances, narrowly squamiform setae; intervals very faintly and finely shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment a little shorter than second; tarsal claws with upper ramus about half as broad at base as lower and shorter.

Genitalia (Text-figs. 174 and 175).

FEMALE. Differs from the *male* by the shorter lamellae of the antennal club, by the quadrate to slightly elongate pygidium which is strongly convex near the apex although almost flat longitudinally and by the antennae which are always ten-segmented whereas they are frequently, although not always, nine-segmented in the *male*.

Type locality: Salisbury, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Salisbury (B.M. (N.H.), S.A.M., D.A.S.R. and B.S.S.); Bent, Matabeleland; Chirinda District. Port. E. Africa: Upper Buzi River; "Mozambique." N. Rhodesia: N'Changa.

Total material seen: 21 examples.

Having been afforded the opportunity of examining the type specimens of both *S. salisburiana* and *A. hypocrita* I have no doubt that they are examples of one species. Exercising my right as first reviser, I select *Schizonycha salisburiana* Péringuey as the valid name for the species redescribed above.

S. spectabilis Pér.

Schizonycha spectabilis Péringuey, 1904, p. 239.

Length 18–20 mm. Breadth 8.5–10 mm.

MALE

Derm reddish testaceous to castaneous, shining. *Head* with labral emargination strongly acute; anterior clypeal face reflexed, almost plane vertically, gap in its row of setiferous punctures very broad; clypeal carina moderately arcuate; fronto-clypeal suture visible but not strongly marked; carina across vertex feebly raised; clypeal punctures elongate with their internal borders slightly raised; frontal punctures obliquely transverse with their antero-internal borders raised. *Pronotum*

with anterior border strongly sinuate, slightly forwardly arcuate medially; posterior margin with a somewhat irregularly raised hind border, interrupted in parts by punctures, particularly laterally; lateral borders with outstanding setae shorter than basal anterior tarsal segment; transverse, subbasal, impunctate areas clearly marked; discal punctures variable, usually widely scattered; punctures closer toward lateral borders, much closer and slightly scabrose along anterior margin; punctures containing either an inverted U- or an M-shaped groove and bearing small, whitish, narrowly squamiform setae slightly shorter than the diameter of a puncture; intervals finely and faintly shagreened. Scutellum transverse; coarsely punctate basilaterally; punctures as on pronotum; intervals finely shagreened. *Elytra* with punctures variably separated by from one to several diameters, bearing small setae similar to those of pronotum; intervals almost smooth; lateral borders with stiff, outstanding setae from bases to about level of first abdominal segment. Pygidium slightly transverse; sparsely setoso-punctate, even more sparsely punctured apically; setae in punctures minute; intervals finely shagreened. Metasternum, episterna and hind coxae variously clothed; anterior margins of episterna with long setae in punctures, discs and posterior margins with punctures bearing large, squamiform setae, much larger than any on upper surfaces; metasternum with squamiform setae posterolaterally, these setae somewhat larger than those of episterna; hind coxae with punctures bearing large, squamiform setae anteriorly and laterally, setae fine and non-squamiform mediobasally. Abdominal segments variably punctate, more closely so laterally than medially; punctures bearing long, fine, non-squamiform setae, or large squamiform setae, or, especially on penultimate segment, minute setae as on upper surfaces; intervals finely shagreened laterally, almost smooth toward midline. *Legs* with anterior tibiae tridentate; basal hind tarsal segment five sixths as long as second; tarsal claws with upper ramus about half as broad as and a little shorter than lower; anterior tarsi very long.

Genitalia (Text-figs. 180 and 181).

FEMALE. Differs from the *male* by the shorter lamellae of the antennal club, the shorter and stouter tarsi and its less convex pygidium.

Type locality: Sebakwe, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Sebakwe (S.A.M.); "Rhodesia."

Total material seen: 3 examples.

This species is very closely related to the east African *S. major* Kolbe. In fact a longer series of the two may show that only one species is involved.

S. valida Boh.

Schizonycha valida Boheman, 1857, p. 96.

Length 18-21 mm. Breadth 9-10.5 mm.

MALE

Derm dark red-brown. *Head* with labral emargination acute; anterior clypeal face strongly reflexed, weakly convex vertically, median gap in its row of setiferous

punctures moderate; anterior edge of clypeus briefly truncate medially, broadly rounded laterally; clypeal carina arcuate, more rounded medially than laterally; frontoclypeal suture not clearly visible on dark derm; vertex with a clearly-marked transverse carina; clypeal punctures elongate, their inner borders more sharply formed than their outer borders; frontal punctures close-set, irregular, usually transverse; clypeal and frontal punctures bearing minute, inconspicuous setae. *Pronotum* with anterior border strongly sinuate laterally, almost directed obliquely backward to obtuse anterior angles; posterior angles sharply formed, obtuse; hind margin with a raised posterior border in front of scutellum, border more or less obliterated toward hind angles; lateral borders with stiff, outstanding setae about as long as basal anterior tarsal segment; surface with more or less clearly indicated subbasal, transverse, impunctate areas and frequently with an irregularly formed, longitudinal median impunctate area as well; discal punctures coarse, variably separated by from one to several diameters, each containing an inverted U-shaped groove and bearing a minute seta about as long as the diameter of a puncture; punctures asperose along anterior margin and with setae a little longer and more conspicuous than those on disc; intervals finely shagreened. Scutellum transverse (3:5); punctures more or less confined to lateral margins, bearing setae similar to those of pronotal disc; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, bearing setae similar to those of pronotal disc; intervals with faint traces of shagreening and also with scattered micropunctures; lateral borders with stiff, outstanding setae from bases to level of third or fourth abdominal segment. Pygidium transverse (17:21); strongly convex; impunctate along midline; punctures elsewhere annulate, separated by from one to two diameters, bearing minute setae, finer than those of elytra; intervals finely and faintly shagreened. Metasternum, episterna and hind coxae bearing fine, rather sparsely set, yellowish setae in punctures, setae on posterior half of episterna sometimes much shorter than those elsewhere and faintly squamiform. Abdominal segments very sparsely punctured medially, more closely punctured laterally; punctures along lateral margins comprising a single, irregular, transverse row of fine, suberect hairs supplemented by other shorter, more or less appressed, sometimes slightly squamiform setae; penultimate segment with longer bristles across middle of segment as well as laterally; intervals finely shagreened. *Legs* with anterior tibiae strongly tridentate, apical tooth feebly curved; basal hind tarsal segment a little shorter than second (c. 6:7); tarsal claws with upper ramus about twice as long as lower and slightly broader.

Genitalia (Text-figs. 178 and 179).

FEMALE. Very similar to the *male* but with shorter lamellae to the antennal club, with the basal segment of the hind tarsi a little longer than the second segment, with the lower ramus of the tarsal claws broader, though distinctly shorter than the upper ramus. The pygidium of the *female* is sometimes more convex than that of the *male*.

Type locality: Around the Orange River (N.H.R.M.).

Other material examined from: Natal: Weenen. S. Rhodesia: Khami.

Total material seen: 4 examples.

The Boheman collection in Stockholm contains three specimens named *S. valida*. Two of these are *males* and bear the data "Damara". Both have had their genitalia dissected out and mounted by Péringuey and one bears a label "*Schizonycha valida* Ty." in that author's handwriting. The third specimen is a *female* and bears the data "Caffraria J. Wahlb. Type ♀" together with a red "TYPUS" label. All three examples agree with the description of the species given by Boheman, but only the *female* comes within the habitat range recorded by Boheman.

Péringuey obviously interpreted *S. valida* from the two *males*. These two are not of the same species as the single *female* example referred to above. From their place of capture, it is clear that they do not form part of the original material upon which Boheman based *S. valida* and so the *female* specimen with its "Type" and "TYPUS" labels must be regarded as the sole survivor of the original material. I hereby select this specimen to be the lectotype of *Schizonycha valida* Boheman.

The species to which the two *males* belong had not been described prior to 1904. Therefore Péringuey effectively described a new species when he interpreted *S. valida* from this material. He thus created a homonym which is noticed and replaced on page 168 of the present paper.

S. vryburgensis sp. n.

Length 12.5-14 mm. Breadth 6.5-7 mm.

MALE

Colour testaceous. *Head* with labral emargination weakly acute; anterior clypeal face feebly convex vertically, gap in its row of setiferous punctures broad; clypeal carina strongly arcuate; frontoclypeal suture visible medially, following line of clypeal carina laterally; transverse carina across vertex well marked, sometimes grooved behind; clypeal punctures elongate; frontal punctures scabrose. *Pronotum* with anterior border slightly sinuate laterally, anterior angles directed forward; posterior margin with a raised hind border which is distinct medially, but is interrupted toward lateral borders by punctures; lateral borders with setae sometimes longer than basal anterior tarsal segment; disc with irregularly and sparsely arranged punctures; punctures more closely set toward anterior and lateral margins, scabrose along anterior margin; punctures bearing small, but distinct, white, squamiform setae; intervals finely but distinctly shagreened. Scutellum equilateral or slightly transverse; punctate laterally; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter and bearing squamiform setae similar to those of pronotum; lateral borders with outstanding setae from bases to level of fourth abdominal segment; intervals between coarse discal punctures slightly roughened. Pygidium transverse, set with variably spaced, annulate punctures bearing longer and more slender squamiform setae than those of elytra; intervals finely shagreened. Metasternum, episterna and hind coxae with long, fine, pale yellow hairs; intervals smooth. Abdominal segments with punctures arranged in more or less distinct transverse rows, more closely set laterally where they bear squamiform setae somewhat larger than those of upper surfaces; intervals

finely shagreened laterally. *Legs* with anterior tibiae tridentate; basal hind tarsal segment about two thirds as long as second; tarsal claws with upper ramus nearly twice as long as lower.

Genitalia (Text-figs. 182 and 183).

FEMALE. Unknown.

Holotype: A *male* in the South African Museum, Cape Town. Vryburg, Cape Province 1917 (J. Brown).

Paratypes: 3 *males* with same data as holotype (S.A.M. and B.M. (N.H.)).

S. rufina Boh.

Schizonycha rufina Boheman, 1857, p. 97.

Schizonycha rufina Boh., Péringuey, 1904, p. 223.

Length 13-18 mm. Breadth 7.5-9.5 mm. (After Péringuey.)

MALE

Very like *S. vryburgensis* (p. 174) but for the characters referred to in the key to species, for its larger size and for the following:

The clypeal carina has a tendency to be bluntly angled medially. The pronotal and elytral setae are relatively smaller and less conspicuous than those of *vryburgensis*. The pygidium is usually less strongly transverse and a little more convex. The setae along the lateral margins of the abdominal segments are generally narrower and less conspicuous than the corresponding setae on *S. vryburgensis*.

Genitalia (Text-figs. 184 and 185).

FEMALE. Unknown to me, but stated by Péringuey to differ from the *male* by having slightly shorter tarsi.

Type locality: Boheman gives the whole of "Caffraria" as the habitat of this species (N.H.R.M.).

Other material examined from: Cape Province: Kimberley; Riversdale (S.A.M.). Natal: Port Natal. Transvaal: Rustenburg; Potchefstroom; Potgietersrust (S.A.M.); Messina (S.A.M.). Bechuanaland: Nata (F.); Ngami (F.); Vryburg. Orange Free State: Trompsburg (F.); Kroonstad. S-W. Africa: Windhoek area (F.); Windhoek (S.A.M.). Also from Nouport (F.).

Péringuey gives Lydenburg and Boksburg in the Transvaal as further localities for this species.

Total material seen: 28 examples.

Prof. Malaise has kindly made available to me the three specimens bearing the name *S. rufina* Boh.

All three specimens are *males* and bear the data "Caffraria, J. Wahlb.[erg], one having in addition a red "TYPUS" label. My findings in connection with these three specimens are set out below:

Specimen (1). This does not agree with Boheman's original description. It is an example of *S. usambarae* (p. 156).

Specimen (2). This example agrees with Boheman's original description, but is not the same species as the *S. rufina* Boh. interpreted by Péringuey. It is in point of fact an example of Péringuey's interpretation of *S. valida* Boh. (see p. 169).

Specimen (3). This specimen also agrees with the description given by Boheman of *S. rufina* and, in addition it is an example of the species interpreted by Péringuey as *S. rufina* Boh.

Although in theory either of specimens (2) and (3) could be selected as the lectotype of *S. rufina* Boh., selection of the second specimen would lead to confusion. The selection of the third example would cause no change in the present interpretation of Boheman's species and so I propose to take the latter course. I hereby select specimen No. (3)—which I have labelled in an appropriate manner, to be the lectotype of *Schizonycha rufina* Boheman.

S. straminea (Pér.)

Atys straminea Péringuey, 1904, p. 256.

Atys straminea Pér., Andreae, 1933, pp. 105, 106.

Length 11–12.5 mm. Breadth 6–6.75 mm.

MALE

Derm yellowish to testaceous. Head with a general appearance similar to that of *S. inverta* (p. 183) and *S. fallax* (p. 117); labral emargination acute; anterior clypeal face reflexed, vertically plane, with a broad median gap in its row of setiferous punctures; anterior edge of clypeus emarginate medially, arcuate laterally, extreme lateral borders oblique, but straight; clypeal carina arcuate medially, overlying frontoclypeal suture laterally; vertex angled, often with a roughly indicated, incomplete transverse carina; clypeal punctures small, irregular, often slightly elongate; frontal punctures variable, usually concentrated toward lateral margins, slightly asperose; setae in punctures minute, fine. *Pronotum* with anterior border arcuate medially, sinuate toward obtuse anterior angles; posterior angles obtuse; posterior margin without a raised hind border in front of scutellum; lateral borders set with setae much shorter than basal anterior tarsal segment; surface with transverse, subbasal, impunctate areas not well-defined; punctures of disc and margins similar to each other, separated by from less than one to about one and a half diameters, each containing an inverted U-shaped groove and bearing a minute, white seta about as long as the diameter of a puncture; intervals smooth, or almost so. Scutellum transverse (c. 3 : 4); punctate laterally; punctures usually separated by one diameter or less, similar to or slightly smaller than those of pronotum and bearing minute setae; intervals finely and faintly shagreened. *Elytra* with punctures separated by less than their diameter as a rule, bearing minute setae often shorter than the diameter of a puncture; intervals smooth, shining; lateral borders with rather shorter outstanding setae near shoulders than is usual in *Schizonycha*, setae between level of hind coxae and apices minute, not conspicuous. Pygidium transverse (c. 45 : 70); convex both longitudinally and transversely; closely punctured; punctures small, annulate, frequently separated by less than

one diameter; intervals smooth or finely and faintly shagreened. Metasternum, episterna and hind coxae with setiferous punctures except almost impunctate mediobasal area of metasternum; setae long and obvious on anterior parts of metasternum and episterna, elsewhere very short and inconspicuous; intervals almost or quite smooth. Abdominal segments with punctures separated by a little more than one diameter laterally, by considerably more than this medially; punctures bearing white or yellowish setae which are for the most part about as long as the diameter of a puncture; some punctures, principally those of fifth segment and a more or less regular transverse row on each segment, bearing distinctly longer setae; intervals with very faint microsculpture, often very finely transversely rugulose. *Legs* with anterior tibiae tridentate; basal hind tarsal segment about half as long as second; tarsal claws with upper ramus finer than lower, but longer.

Genitalia (Text-figs. 186 and 187).

FEMALE. Very similar to the *male*, but with much shorter lamellae to the antennal club; with basal hind tarsal segment two thirds as long as second and with the pygidium almost flat longitudinally.

Type locality: Ovamboland, S-W. Africa (no exact locality) (S.A.M.).

Other material examined from: S.W. Africa: Grootfontein (S.A.M.). S. Rhodesia: Mafunga-busi (D.A.S.R.); Salisbury (B.M. (N.H.) and D.A.S.R.). N. Rhodesia: Chingola; Feira, Zambezi (S.A.M.). Transvaal: Rustenburg. Nyasaland: Cholo.

Total material seen: 29 examples.

S. rhodesiana Moser

Schizonycha rhodesiana Moser, 1920, p. 24.

Length 14 mm. Breadth 7–8 mm.

MALE

Colour dark testaceous to castaneous. *Head* with labral emargination markedly acute (45° – 60°); anterior clypeal face scarcely convex, median gap in its row of setiferous punctures broad; clypeal carina arcuate medially, not strongly raised; fronto-clypeal suture distinct; transverse carina across vertex somewhat feebly raised; clypeal punctures closely set, elongate; frontal punctures transverse or obliquely transverse. *Pronotum* with anterior border sinuate toward anterior angles which are directed obliquely forward; posterior margin without a raised hind border; lateral borders strongly crenulate, bearing outstanding setae often as long as basal anterior tarsal segment; surface with distinct transverse, subbasal, impunctate areas, elsewhere set with coarse punctures separated by from one half to one and one half diameters, each containing an inverted U-shaped groove and bearing a small, but conspicuous, white, squamiform seta; punctures somewhat scabrose along anterior margin; intervals finely and faintly shagreened. Scutellum transverse (4:7); closely and coarsely punctate except mediobasally and along lateral borders; punctures bearing setae similar to those of pronotum; intervals

finely shagreened. *Elytra* with punctures separated by less than one diameter except near scutellum, each bearing a seta similar to those of pronotum; intervals with faint traces of shagreening; lateral borders with long, outstanding setae from bases to level of second or third abdominal segment, setae thence to apicosutural angles mostly minute and white with an occasional longer, testaceous bristle. Pygidium with entire surface set with annulate punctures separated by less than their diameter and bearing short, white, outstanding, squamiform setae; intervals finely, but quite strongly shagreened. Metasternum, episterna and hind coxae with punctures usually separated by about one diameter, episternal punctures a little larger than those of metasternum and hind coxae; punctures of episterna bearing some white, narrowly squamiform setae as well as long, fine hairs; setae in punctures of metasternum and hind coxae usually long and fine, a few setae on posterolateral parts of metasternum and lateral coxal areas similar to squamiform setae of metasternal epimera; intervals finely and faintly shagreened. Abdominal segments more closely punctured laterally than medially; punctures annulate with anterior borders tuberculate, bearing either long, outstanding, yellowish testaceous setae or short, white, subrecumbent, squamiform setae, the latter more especially laterally and anterolaterally; intervals finely and faintly shagreened, more noticeably so toward lateral borders. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment slightly shorter than second; tarsal claws of anterior legs with upper ramus shorter and finer than lower, claws of middle and hind legs with upper ramus slightly longer than lower.

Genitalia (Text-figs. 188 and 189).

FEMALE. Broader than the *male* and with the pygidium less convex longitudinally and with the basal hind tarsal segment almost or quite as long as the one following.

Type locality: Rhodesia (Z.M.B.).

Other material examined from: S. Rhodesia: Salisbury (B.M. (N.H.) and D.A.S.R.). Tanganyika Terr.: Kigonsera (B.S.S.).

Total material seen: 7 examples.

S. manicana Pér.

Schizonycha manicana Péringuey, 1904, p. 232.

Length 14.5–15.5 mm. Breadth 6–7.5 mm.

MALE

General colouring the same as that of *S. rhodesiana*. Head almost identical with that of *rhodesiana* except for the characters referred to in the key to species. The *pronotum* differs from that of *rhodesiana* in that the anterior border is more strongly sinuate laterally and slopes obliquely backward to the anterior angles, and in that the setae in the punctures of the pronotal disc are a little smaller and less conspicuous. The *elytra* have finer and less conspicuous setae in their punctures and the outstanding setae along the lateral borders approach more closely to the apical borders than is the case in *S. rhodesiana*. The pygidium differs from that of *rhodesiana* as shown

in the key. The undersides of the two species are extremely alike, but a difference exists in the legs (Text-fig. 47). In *S. manicana* the upper ramus of all the tarsal claws is finer and shorter than the lower.

Genitalia (Text-figs. 192 and 193).

FEMALE. Slightly broader than the *male*; with the antennal club having distinctly shorter lamellae; with the pygidium more transverse and almost concave medially; with the upper ramus of the middle and hind tarsal claws as long as the lower and with the apical border of the last abdominal segment shallowly excised on either side of the arcuate middle section instead of being simply shallowly emarginate medially as it is in the *male*.

Type locality: Manica, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Salisbury (B.M. (N.H.) and D.A.S.R.); Lomagundi (D.A.S.R.); Gwelo (D.A.S.R.). Belgian Congo: S.E. Katanga, 4,000 ft.

Total material seen: 13 examples.

S. constrata Pér.

Schizonycha constrata Péringuey, 1904, p. 221.

Length 13–14 mm. Breadth 7–8 mm.

MALE

Colour ferrugineous. *Head* with labral emargination strongly acute; anterior clypeal face vertically convex with a wide gap in its row of setiferous punctures; anterior edge of clypeus truncate medially; clypeal carina strongly arcuate; frons about twice as long in midline as clypeus; both clypeus and frons with irregularly formed punctures, frons with an anteromedian impunctate area. *Pronotum* with anterior borders slightly sinuate laterally; anterior and posterior angles obtuse; lateral borders regularly crenulate and with setae as long as basal anterior tarsal segment; basal border not raised medially; surface with two transverse, subbasal, impunctate, declivous areas, one on either side of midline; disc irregularly punctured, each puncture containing an inverted U-shaped groove and bearing a white, squamiform seta about as long as the diameter of a puncture; intervals finely shagreened. *Scutellum* punctate laterally, intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, each with a squamiform seta slightly smaller than those on pronotum; intervals smooth; lateral borders with long, outstanding, yellowish-testaceous setae from bases to level of hind coxae, setae near bases as long as basal anterior tarsal segment, becoming shorter posteriorly. *Pygidium* slightly transverse; annulate-punctate, punctures often larger toward upper angles; setae in punctures recumbent, squamiform, slightly longer and more obvious toward upper angles; intervals finely shagreened. *Metasternum*, *episterna* and hind coxae closely punctured, even across middle of foremost; usually with long, fine, outstanding setae in punctures; posterolateral parts of metasternum, posterior parts of episterna and lateral margins of hind coxae often with a few large, white,

recumbent, squamiform setae as well. Abdominal segments with punctures across midline more or less restricted to a single row on each bearing short, suberect, yellowish setae; punctures more numerous toward lateral margins, a few here also with outstanding, yellowish setae, but most with recumbent, white, squamiform setae as long as, or slightly longer than, those of elytra; intervals finely, but very faintly shagreened. *Legs* with anterior tibiae tridentate, basal tooth well-marked; basal hind tarsal segment slightly shorter than the one following; tarsal claws with lower ramus a little more than half the length of upper and almost as broad at base, upper tooth shallowly and broadly emarginate beneath apex.

Genitalia (Text-figs. 190 and 191).

FEMALE. Unknown.

Type locality: Pretoria, Transvaal (S.A.M.).

Other material examined from: Transvaal: Pretoria; Heidelberg.

Péringuey records Waterberg, Transvaal as a locality for this species.

Total material seen: 7 examples.

S. inostralis sp. n.

Length 15 mm. Breadth 8.25 mm.

MALE

Derm deep pitchy-red, shining. *Head* with labral emargination weakly acute; anterior clypeal face plane, reflexed medially, gap in its row of setiferous punctures broad; clypeal carina strongly arcuate, rather less strongly raised than is usual for the genus; frontoclypeal suture clearly marked; clypeal punctures almost circular; frontal punctures closely set, irregularly shaped. *Pronotum* with anterior border markedly sinuate laterally, almost sloping obliquely backward to anterior angles; posterior angles sharp, but not very strongly obtuse; crenulate lateral borders set with setae considerably shorter than basal anterior tarsal segment; posterior margin without a raised hind border in front of scutellum; surface without clearly indicated transverse, subbasal impunctate areas; disc with coarse, closely set punctures, frequently separated by much less than one diameter, each bearing a small, but conspicuous squamiform seta; intervals finely and faintly shagreened. Scutellum transverse (5:7); coarsely setoso-punctate laterally; punctures similar to those of pronotum; intervals finely shagreened. *Elytra* with punctures separated by less than their own diameter as a rule, bearing small, but obvious, squamiform setae; intervals almost smooth, sometimes with faint traces of shagreening; lateral borders with stiff, outstanding setae from bases to level of hind coxae, thence to apicosutural angles with small, white setae interspersed occasionally by longer bristles. Pygidium transverse, coarsely annulate-punctate, more closely so basally where they are separated by less than one diameter; punctures bearing setae finer than those of elytra; intervals somewhat irregularly raised, with faint traces of shagreening in some parts. Metasternum, episterna and hind coxae with stiff, outstanding, yellowish setae or, on the latter two areas, fine, squamiform setae, much longer than any on upper surfaces; coarse punctures annulate and, except

for mediobasal area of metasternum, separated by less than their diameter. Abdominal segments annulate-punctate, each puncture tuberculate anteromedially and bearing either a short, white, narrowly squamiform seta, or a longer, fine, yellow, non-squamiform bristle; squamiform setae longer than those of elytra, but shorter than those of metepisterna and hind coxae; punctures separated by less than one diameter toward lateral borders, by more than one diameter medially; intervals smooth except along extreme lateral margins where they are finely shagreened. *Legs* with basal (third) external tooth of anterior tibiae feeble; basal hind tarsal segment about two thirds as long as second; tarsal claws of anterior legs with upper ramus shorter and finer than lower; upper ramus of tarsal claws of middle and hind legs almost or quite as long as lower.

Genitalia (Text-figs. 194 and 195).

FEMALE. Unknown.

Holotype: A *male* in the South African Museum, Cape Town. Resolution, Grahamstown [Cape Province] 1930 (Miss Walton).

Paratype: One with the same data as the holotype, but "Oct.-Nov. 1928".

S. abrupta sp. n.

Length 16-17 mm. Breadth 8.5-9 mm.

MALE

Derm castaneous, somewhat shining; head, pronotum and elytra almost unicolorous. *Head* with labral emargination slightly obtuse (Text-fig. 18); anterior clypeal face not convex vertically, with a brief median gap in its row of setiferous punctures; anterior edge of clypeus briefly straight medially, sometimes slightly emarginate; clypeal carina weakly arcuate; frontoclypeal suture usually not clearly visible; transverse carina on vertex usually weakly arcuate when viewed from above, not strongly raised, with a row of contiguous punctures immediately behind it; clypeal punctures elongate; frontal punctures more or less radially arranged around a centre situated immediately behind frontoclypeal suture; setae on frons and clypeus minute, white or yellowish, slightly more conspicuous toward eyes. *Pronotum* with anterior border very slightly sinuate, anterior angles directed obliquely forward; posterior margin without a raised hind border medially; lateral borders with stiff, outstanding setae a little longer than basal anterior tarsal segment; surface with narrow, transverse, subbasal, impunctate areas, one on each side; disc with coarse punctures each containing an inverted U-shaped groove and separated by less than one diameter in most places, more sparsely arranged posterolaterally; punctures bearing small, white, recumbent, narrow setae, not much larger, if at all, than diameter of punctures; intervals finely and faintly shagreened. Scutellum transverse; closely annulate-punctate laterally; intervals between punctures finely and faintly shagreened; punctures bearing small setae similar to those on pronotum. *Elytra* with punctures separated by slightly more than one diameter, each with a seta similar to those on pronotum; intervals between punctures

very slightly roughened; lateral borders with stiff, outstanding, yellow setae from bases to level of hind coxae or slightly beyond; setae behind level of hind coxae along lateral and apical elytral borders usually minute, white, recumbent. Pygidium slightly transverse, feebly convex vertically, strongly convex horizontally; annulate-punctate; punctures separated by one diameter or more, bearing minute setae, often scarcely more than half as long as the diameter of a puncture; intervals faintly and finely shagreened. Metasternum, episterna and hind coxae annulate-punctate, punctures separated by more or less their own diameter except on sparsely punctate posteromedian area of metasternum; punctures bearing long, fine, deep yellow setae. Abdominal segments with white, slightly squamiform setae in punctures toward lateral margins; setae smaller and much less conspicuous toward midline; intervals almost smooth except along extreme lateral margins. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment distinctly shorter than second (3:5-3:4); tarsal claws with lower ramus less than half as long as upper and widely divergent from it (Text-fig. 10).

Genitalia (Text-figs. 206 and 207).

FEMALE. Differs from the *male* by having reduced, non-functional wings. The antennal club has shorter lamellae; the tarsi are shorter; the body is more rounded; the metepisterna, hind coxae and postero-lateral areas of the metasternum bear some white, squamiform setae as well as long, fine hairs; the length-ratio of the apical spurs of the hind tibiae is much less than 2:1 whereas in the *male* it is almost exactly 2:1.

Holotype: A *male* in the British Museum (Nat. Hist.). Longhope, Cape Province Jan.-Feb. 1928 (Miss E. Gough).

Paratypes: 2 *males* with same data as holotype. (B.M. (N.H.) & (Z.M.B.)). 1 *female* "Cap. Krebs" (Z.M.B.). 1 *female* "Pr. b. Sp. Lichtenst."

S. deceptor sp. n. (Text-fig. 1)

Length 14-14.5 mm. Breadth 7.5 mm.

MALE

This species is very closely related to *S. abrupta*, described above. The unusual formation of the elytral epipleurae is a character which readily distinguishes it from its close relative and is used in the key to species. In other respects *abrupta* and *deceptor* are very alike. The description of the former applies equally well to *deceptor* except for the characteristics listed below.

The species is smaller and reddish testaceous in colour, the derm being moderately shining. The *head* has the labral emargination rightangled, the median gap in the row of setiferous punctures along the anterior face of the clypeus is moderately broad and the frontoclypeal suture is clearly visible. The pronotum has the discal punctures slightly more widely spaced. The *elytra* are a little more sparsely and less regularly punctured and the intervals are more noticeably sculptured; the lateral borders have the long, outstanding setae confined to between the bases and the

level of the hind border of the metasternum, the setae behind this point are very short and directed more or less vertically downward. The pygidium is finely, but quite strongly shagreened between coarse punctures.

Genitalia (Text-figs. 196 and 197).

FEMALE. Unknown.

Holotype: A male in the Museum G. Frey, Munich. Trompsburg [Orange Free State] 26.10.48 Leg. C. Koch.

Paratypes: 8 with same data as holotype (F. and B.M. (N.H.)). 1 male Hondeklipbaai [Namaqualand, Cape Province] 16.11.48 (No collector) (F.).

S. inverta (Pér.)

Atys inverta Péringuey, 1904, p. 254.

Length 11.5 mm. Breadth 6 mm.

MALE

Colour pale testaceous. *Head* with labral emargination very slightly obtuse; anterior clypeal face reflexed medially, not vertically convex; gap in its row of setiferous punctures broad; clypeal carina moderately arcuate; frontoclypeal suture distinct; basal cephalic carina moderately well-marked; frons and clypeus with irregularly and rather sparsely arranged punctures. *Pronotum* with anterior border faintly sinuate laterally, if at all; posterior margin without a raised hind border in front of scutellum; setae along lateral borders shorter than basal anterior tarsal segment; disc with punctures separated by their own diameter or more, each containing an inverted U-shaped groove and bearing a most minute seta; no subbasal impunctate areas present; intervals between coarse punctures smooth. Scutellum multipunctate, especially laterally; intervals finely and faintly shagreened. *Elytra* with deep, close punctures separated by one diameter or less, each bearing a minute seta a little more conspicuous than those of pronotal punctures; intervals smooth; lateral borders set with rather short outstanding setae near shoulders, setae elsewhere minute. Pygidium transverse, with closely set, circular punctures, often separated by less than one diameter; intervals smooth or somewhat wrinkled, not shagreened. Metasternum, episterna and hind coxae almost glabrous, a few short setae present on anterior parts of metasternum. Abdominal segments with setiferous punctures separated toward lateral margins by about one diameter, becoming progressively more sparsely arranged toward midline; intervals very faintly shagreened toward lateral borders, if at all, smooth on disc. *Legs* with anterior tibiae tridentate; basal hind tarsal segment very little more than half as long as the one following; upper ramus of tarsal claws scarcely longer than lower.

Genitalia (Text-figs. 198 and 199).

FEMALE. Unknown.

Type locality: Delagoa Bay, Port. E. Africa (S.A.M.).

Other material examined from: Nyasaland: Mlanje.

Total material seen: 2 examples.

Péringuey's type specimen has the head and thorax missing and the genitalia, which have been dissected out and mounted, are damaged. They are, however, unlike any other south African species (although they resemble the genitalia of some species from other parts of Africa). The peculiar prolongation of one side of the apical borders of the hind tibiae (Text-fig. 48) is very characteristic, but in other respects this species is very similar to *S. straminea* Pér. (p. 176).

S. minor sp. n.

Length 10 mm. Breadth 5.5-6 mm.

MALE

Colour piceous red. *Head* with labral emargination almost rightangled; anterior clypeal face slightly convex vertically, gap in its row of setiferous punctures moderately broad; clypeal carina strongly arcuate and slightly angulate medially; frontoclypeal suture readily visible; transverse carina on vertex distinctly formed; clypeal punctures elongate; frontal punctures irregularly scabrose. *Pronotum* with anterior angles slightly forwardly produced, anterior border almost evenly emarginate; posterior margin without a raised hind border in front of scutellum; surface with annulate punctures bearing small, fine setae; punctures separated by less than one diameter except medially and basilaterally; intervals between punctures smooth except for micropunctures; lateral borders set with stiff, outstanding setae shorter than basal anterior tarsal segment. Scutellum equilateral, bearing a few punctures, especially anteriorly; intervals finely shagreened. *Elytra* with punctures separated for the most part by one diameter or less, bearing small, fine setae; intervals between coarse punctures roughened, set with micropunctures; lateral borders with long, outstanding setae near shoulders, shorter, subrecumbent setae posteriorly. Pygidium with annulate punctures separated by about their own diameter basally, by considerably more than one diameter toward apex; punctures bearing small, fine setae similar to those on elytra; intervals finely shagreened. Metasternum, episterna and hind coxae sparsely set with short, non-squamiform setae; intervals between punctures finely shagreened. Abdominal segments, except for the last two, each with a single transverse median row of punctures, pluripunctate laterally; punctures bearing short, fine setae; intervals almost smooth except along extreme lateral margins. *Legs* with anterior tibiae tridentate; basal hind tarsal segment almost as long as second; tarsal claws with upper ramus distinctly longer than lower.

Genitalia (Text-figs. 200 and 201).

FEMALE. Differs from the *male* in being more rounded in outline. It is wingless and has the humeral calli of the elytra reduced in prominence. The lower ramus of the tarsal claws is much shorter than the upper and curves away from it sharply. The metasternal epimera have a few, slightly squamiform setae in their punctures as well as non-squamiform hairs.

Holotype: A *male* in the South African Museum, Cape Town. Grootfontein, S-W. Protect.[-ectorate] Jan. 1920 (R. W. Tucker).

Paratype : 1 female Withdrai, Südl. Kalahari 8.5.48 (no collector) (F.).

In general facies, this species is like a small example of *S. saga* Pér. (p. 198) or a slightly large specimen of *S. minima* Pér. (p. 205), but the absence of the long setae at the base of the mentum place these two species in a different major section of the key. Also the punctuation of *S. saga* differs markedly from that of *S. minor* and in the case of *S. minima*, the setae of the upper surfaces are large, conspicuous and distinctly squamiform.

S. perforata Burm.

Schizonycha perforata Burmeister, 1855, p. 267.

Schizonycha ciliata Péringuey (*nec* Burm.), 1904, p. 203 (*syn nov.*).

Length 20.5–23 mm. Breadth 8–9.5 mm.

MALE

Colour variable, usually castaneous with head and pronotum slightly darker than elytra. *Head* (Text-fig. 21) with labral emargination slightly obtuse (100–110°); anterior clypeal face vertically convex, with a moderately broad median gap in its row of setiferous punctures; upper anterior edge of clypeus sharply emarginate medially; clypeal carina forwardly angulate medially, longitudinal median clypeal carina usually well-marked, especially anteriorly; vertex without a raised transverse carina; clypeal punctures elongate; frontal punctures irregular, closely set. *Pronotum* with anterior border strongly sinuate; anterior angles strongly obtuse; anterior margin strongly convex near anterior angles; posterior angles obtuse; crenulate lateral borders bearing setae often longer than basal anterior tarsal segment, especially in posterior half; posterior margin without a raised hind border in front of scutellum; disc with a longitudinal median impunctate area and two transverse, subbasal, impunctate areas; elsewhere closely scabroso-punctured, each puncture with a small, white, narrowly squamiform seta; intervals finely shagreened and with scattered, minute punctures as well. Scutellum pluripunctate, especially laterally; intervals finely shagreened. *Elytra* with large, setiferous punctures separated by more than their own diameter, setae a little longer than on pronotum; intervals set with micropunctures; lateral borders with stiff, outstanding setae from bases almost to apices, setae palely testaceous, decreasing in length toward apical borders of elytra. Propygidium with transverse rows of closely-set, transverse punctures. Pygidium slightly transverse; convex; more closely punctured over upper half than elsewhere; punctures somewhat scabrose over upper half; all punctures setiferous, setae longer basilaterally; intervals finely shagreened. Metasternum, episterna and hind coxae closely punctured, long setae in punctures giving pectus a densely villose appearance. Abdominal segments with punctures more closely set laterally, some of them scabrose, some punctures bearing long, outstanding setae, others with recumbent, squamiform setae varying in size although usually distinctly larger than any of the upper surfaces; intervals finely shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment as long as or slightly longer than second; upper ramus of all tarsal claws longer than lower and emarginate beneath apices.

Genitalia (Text-figs. 204 and 205).

FEMALE. Apart from the shorter lamellae of the antennal club and the tendency to have a slightly less transverse pygidium, there is practically no difference between the two sexes of this species.

Type locality: Cape of Good Hope (coll. Drege) (Univ. Halle).

Other material examined from: Cape Province: Port Nolloth; Bowesdorp (S.A.M.); Concordia Mine (S.A.M.); Namaqualand (no more detailed locality); Between Kamieskroon and Springbok (S.A.M.).

All the above localities are in the northwestern part of Cape Province.

Total material seen: 12 examples.

Having had the opportunity to study the material, a single *male* example, standing in the Burmeister collection over the name *Sch. perforata*, I have discovered that it is the species interpreted by Péringuey as *S. ciliata* Burm. The true *S. ciliata* Burm. is redescribed on p. 146 of the present paper.

S. abscondita sp. n.

Length 12–14 mm. Breadth 6.5–7.5 mm.

MALE

Derm castaneous. *Head* with labral emargination rightangled; anterior clypeal face reflexed medially, plane or feebly convex vertically, with a broad median gap in its row of setiferous punctures; anterior edge of clypeus straight or weakly emarginate medially, arcuate laterally; clypeal carina strongly arcuate, bluntly angled medially; frontoclypeal suture clearly visible; vertex not sharply angled and without a transverse carina; clypeal punctures about twice as long as broad, usually separated by about one transverse diameter, bearing minute, white setae as long as the transverse diameter of a puncture; frontal punctures transverse or obliquely transverse, slightly asperose, separated by up to one transverse diameter longitudinally, usually by much less than this transversely, bearing setae similar to those of pronotal punctures. *Pronotum* (Text-fig. 31) with anterior border arcuate medially, sinuate toward obtuse anterior angles; posterior angles obtuse; posterior margin with a raised hind border in front of scutellum; lateral borders with outstanding setae longer than basal anterior tarsal segment; surface with clearly-marked transverse, subbasal impunctate areas; punctures of disc and margins annulate or nearly so, separated by from less than one to about two diameters; punctures each with a minute, white seta about as long as its diameter; disc usually with a longitudinal median impunctate space; intervals with faintly indicated shagreening and with scattered micropunctures as well. Scutellum transverse (c. 5 : 7); punctate laterally; punctures usually slightly smaller than those of pronotum, each containing an inverted U-shaped groove and bearing a minute seta about as long as the diameter of a puncture; punctures separated by up to about one diameter; intervals finely and faintly shagreened. *Elytra* with punctures separated by about one diameter or less, bearing minute setae shorter than the diameter of a puncture; intervals almost smooth; lateral borders with outstanding

setae from bases to level of fourth abdominal segment, setae thence to apices few, scattered, minute. Pygidium transverse (5:7); convex; closely annulate-punctate; punctures separated for the most part by less than one diameter and bearing fine setae not or only a little longer than their diameter; intervals finely, often faintly shagreened. Metasternum, episterna and hind coxae with long, fine, yellowish setae in punctures except on posterior parts of episterna, posterolateral parts of metasternum and lateral margins of hind coxae where setae are shorter and often white. Abdominal segments with punctures separated by about one diameter along lateral margins, progressively more widely separated toward midline; each segment with a more or less regular, single row of outstanding setae across its middle; setae in other punctures variable; other setae on discs minute, other setae toward and along lateral margins larger, often much longer than the diameter of a puncture; intervals almost smooth medially, finely shagreened along lateral margins of segments. *Legs* with anterior tibiae tridentate; basal hind tarsal segment four fifths as long as second; tarsal claws with upper ramus longer than lower and shallowly emarginate beneath apex.

Genitalia (Text-figs. 202 and 203).

FEMALE. Very similar to the *male*, but with the basal hind tarsal segment as long as the one following, with a more swollen abdomen and with the lamellae of the antennal club distinctly shorter.

Holotype: A *male* in British Museum (Nat. Hist.). Transvaal 1897 (A. Ross).

Paratypes: 1 *male* with same data as holotype. 1 *male* Johannesburg, TP [Transvaal] Sept., 1919 Ent. S. N. 2845. 1 *male* Pretoria [Transvaal] 3.10.14. 1 *male* Pretoria, Transvaal Oct. 16 1915 "On grapevine foliage". 1 *male* ditto but Nov. 6 1915. 1 *female* Pretoria, Transvaal Oct. 10 1915. 2 *females* Pretoria Tvl. 28.ix.1921. 1 *female* Cedara N. P. [Natal] Oct. 1949 Entomologist S. N. 3924. 1 *male* Bedford View, Jhbg., Transvaal Nov. 1952 (A. L. Capener). 1 *male* Rustenburg Transvaal 12.xii.52 (A. L. Capener). 1 *female* ditto but 10.xii.52. 1 *male* Naboomspauit [Naboomspruit], N. Transvaal 1.49 (Zumpt) (F.). 1 *female* Pretoria, S. Afr. XII.50 (Zumpt) (F.).

Although this species bears a strong superficial resemblance to *S. fimbriata* Brske. (p. 207), the setae at the base of the mentum in *S. abscondita* cause it to appear earlier in the key to species. The other differences between the two species are referred to in their respective descriptions.

S. capensis Burm.

Schizonycha capensis Burmeister, 1855, p. 269.

Schizonycha fraudulenta Péringuey, 1904, p. 226 (*syn nov.*).

Length 15.5–16 mm. Breadth 7.5–8 mm.

MALE

Testaceous to ferrugineous. *Head* with labral emargination almost exactly right-angled; anterior clypeal face not or slightly convex vertically, with a moderate median gap in its row of setiferous punctures; anterior edge of clypeus straight

medially, broadly rounded laterally; clypeal carina moderately to strongly arcuate; frontoclypeal suture clearly visible; vertex more or less sharply angled, without a transverse carina, but with its place marked by a row of very closely set punctures giving the effect of a transverse groove; clypeal punctures slightly elongate, separated by less than one diameter; frontal punctures transverse and obliquely transverse, also separated by less than their own diameter; punctures of both clypeus and frons bearing minute, inconspicuous setae. *Pronotum* with anterior border almost evenly emarginate, emargination somewhat flattened medially; anterior angles obtuse; posterior angles obtuse; posterior margin without a raised hind border in front of scutellum; lateral borders with outstanding setae longer than basal anterior tarsal segment; surface with clearly-marked, transverse, subbasal, impunctate areas; discal punctures annulate or containing an inverted U-shaped groove, punctures separated by from less than one to almost two diameters, bearing minute, white, narrowly squamiform setae about as long as the diameter of a puncture; punctures a little more closely set along anterior margin, but not asperose; intervals between punctures finely shagreened. Scutellum strongly transverse (2 : 3 or more); punctate laterally, punctures bearing similar setae to those of pronotum; intervals finely shagreened. *Elytra* with punctures separated by slightly less than one diameter as a rule, bearing minute, white, squamiform setae very like those of pronotum; intervals with faint traces of shagreening; lateral borders with outstanding setae from bases to level of fourth or fifth abdominal segment. Pygidium transverse (c. 7 : 9); convex both longitudinally and transversely; punctures annulate, separated by about their own diameter or a little more basilaterally, by more elsewhere, especially along midline and apical margin which are more or less impunctate; punctures bearing minute, white setae similar to those of elytra; intervals finely and faintly shagreened. Metasternum, episterna and hind coxae with most punctures bearing long, fine, yellow setae; a few punctures, particularly on posterior half of metepisterna, posterolateral parts of metasternum and extreme lateral margins of hind coxae bearing large, appressed, white, squamiform setae, much larger than any on upper surfaces. Abdominal segments with squamiform setae in most punctures, those toward midline of segments less conspicuous than elytral setae, those toward and along lateral margins larger and more conspicuous than elytral setae; each segment, except the penultimate, with, in addition to the above, a more or less regular single row of punctures across it bearing short, suberect, yellow, non-squamiform setae; penultimate with some much longer setae in punctures; interval between punctures faintly shagreened. *Legs* with anterior tibiae tridentate, the basal tooth being rather faintly produced; basal hind tarsal segment a little more than two thirds as long as the second; tarsal claws of all legs with upper ramus longer than lower and emarginate beneath apex.

Genitalia (Text-figs. 208 and 209).

FEMALE. Unknown to me. Burmeister indicates that he knew both sexes of this species, but does not say how they may be distinguished.

Type locality: S-W. Africa (Univ. Halle).

Other material examined from: "Cap. bonae Spei" (B.S.S.). And the holotype of *S. fraudulenta* Pér. which has no recorded locality (Z.M.B.).

Total material seen : 3 examples.

The Burmeister collections contain a single *male* specimen over the name *S. capensis*. It agrees with the original description of that species given by Burmeister and there is no reason why it should not be the last remaining example from the original series upon which Burmeister based his species.

Through the kindness of Dr. Delkeskamp, I have been able to examine the unique holotype of *S. fraudulenta* Pér. There is no doubt that it is conspecific with *S. capensis*. This vindicates the late Herr Brenske, who had identified the specimen described by Péringuey as *S. fraudulenta* as *S. capensis* Burm.

S. boschimana Pér.

Schizonycha boschimana Péringuey, 1904, p. 202.

Schizonycha litigiosa Péringuey, 1908, p. 680 (*syn. nov.*).

Length 13-14 mm. Breadth 6.5-7 mm.

MALE

Colour castaneous with head and pronotum somewhat darker. *Head* with labral emargination strongly obtuse ; anterior clypeal face vertically convex, without, or with a very brief median gap in its row of setiferous punctures (which runs very close to the lower edge of the anterior face of the clypeus in the middle) ; anterior edge of clypeus almost or quite truncate medially, depressed toward this point when viewed from in front ; clypeal carina strongly arcuate, less sharply raised than usual ; frons and clypeus almost equal in length along midline ; vertex not sharply angled and without a transverse carina ; surface of both clypeus and frons set with asperose punctures, those of clypeus slightly elongate, their internal borders sharply formed and weakly raised. *Pronotum* with anterior border strongly sinuate laterally, anterior margin strongly convex near obtuse anterior angles ; posterior angles obtuse ; lateral borders set with stiff, outstanding setae about as long as basal anterior tarsal segment ; hind margin without a raised posterior border in front of scutellum ; surface, except for two transverse subbasal areas and sometimes a longitudinal median impunctate area as well, set with slightly asperose punctures, more closely and strongly punctured anterolaterally ; punctures bearing minute setae ; intervals with very faint microsculpture. Scutellum sparsely punctured laterally ; intervals finely and faintly shagreened. *Elytra* with punctures separated by about their own diameter, each bearing a small, narrowly squamiform seta ; intervals between punctures finely roughened ; lateral borders fringed with outstanding setae from bases to apices, setae becoming progressively shorter toward apicosutural angles. Pygidium with scattered punctures, generally more closely set on basal half, each puncture bearing a very small, slightly squamiform seta ; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures usually separated by about their own diameter, bearing either long, fine, very pale setae or, especially on the episterna, a mixture of long, fine setae and broad, squamiform setae much larger than any on upper surfaces. Abdominal segments with a mixture of

long, outstanding setae, short, recumbent setae and squamiform setae in punctures ; intervals finely shagreened. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment as long as second ; tarsal claws with lower ramus distinctly shorter and finer than upper ramus which is emarginate beneath its apex.

Genitalia (Text-figs. 210 and 211).

FEMALE. Broader than the *male* ; with slightly shorter lamellae to the antennal club ; with a slightly less transverse pygidium ; with the basal hind tarsal segment a little longer than the one following and with the rami of the tarsal claws less closely applied to each other.

Type locality : Bushmanland, N-W. Cape Province (S.A.M.).

Other material examined from : Transvaal : Nylstroom (S.A.M.) (Holotype and other specimens of *S. litigiosa* Pér.).

Total material seen : 4 examples.

Péringuey described *S. boschimana* from the *female* only. When describing *S. litigiosa* at a later date he had both sexes before him. I have been able to examine the type specimens of *S. boschimana* and *S. litigiosa* and also a *female* specimen from the same series as the latter type. It is clear that *S. boschimana* and *S. litigiosa* are the same species.

S. geilenkeuseri Brske.

Schizonycha geilenkeuseri Brenske, 1898, p. 358.

Schizonycha exasperans Péringuey, 1904, p. 211 (*syn. nov.*).

Length 11.5–12.5 mm. Breadth 5.5 mm.

MALE

Derm testaceous with head and pronotum usually darker. *Head* with labral emargination very strongly obtuse ; anterior clypeal face slightly convex vertically, with a narrow median gap in its row of setiferous punctures, row of punctures approaching very closely the lower anterior edge of the clypeus ; upper anterior edge of clypeus semicircular (it may appear to be more or less truncate medially if viewed from above, but this is due to its being depressed medially (Text-fig. 25)) ; clypeal carina arcuate ; frontoclypeal suture visible, not backwardly arcuate medially ; head without a transverse carina on vertex and not sharply angled at vertex ; frontal punctures irregular and scabrose ; clypeal punctures more regular and usually elongate. *Pronotum* with anterior border strongly sinuate, anterior angles directed obliquely backward ; posterior angles strongly obtuse ; hind margin without a distinct raised posterior border in front of scutellum ; lateral borders strongly sinuate behind anterior angles when viewed from the side, crenulate except for a short distance behind anterior angles, set with outstanding setae shorter than basal anterior tarsal segment ; disc set with shallow, slightly transverse punctures, less widely separated anteriorly and laterally than elsewhere, setae in punctures minute, scarcely longer than the diameter of a puncture ; intervals finely and faintly shagreened. Scutellum with a varying number of large, annulate punctures ; intervals finely and faintly shagreened. *Elytra* with punctures separated by more

than one diameter, by two or more diameters toward apices, punctures bearing minute, narrowly squamiform setae more conspicuous than those of pronotal disc; intervals very finely and faintly shagreened; lateral borders with outstanding, conspicuous setae near bases, setae elsewhere minute, inconspicuous. Pygidium slightly transverse; apical border more or less truncated; annulate-punctate, punctures separated by from one to two diameters toward upper margin, progressively more sparsely arranged toward lower border; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures separated by their own diameter or more except on disc of metasternum which is almost impunctate; punctures of metasternum and hind coxae bearing long, fine, subrecumbent setae except for a few, slightly squamiform setae laterally; episterna with punctures, except those near anterior borders, bearing long, appressed, narrowly squamiform setae. Abdominal segments almost impunctate medially, punctures toward lateral margins set for the most part with recumbent, slightly squamiform setae intermediate in size between those of upper surfaces and those of metasternal epimera, some setae a little larger and suberect, a few, particularly on penultimate segment, much longer, suberect and bristle-like; intervals finely shagreened laterally. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment as long as second segment; tarsal claws with upper ramus more than twice as long as lower and more robust at base.

Genitalia (Text-figs. 212 and 213).

FEMALE. Almost inseparable externally from the *male* except for a slightly more bulbous abdomen, an almost quadrate pygidium with a rounded apex, shorter hind tarsi and the lower ramus of the anterior tarsal claws which in the *female* is as broad as the upper ramus.

Type locality: "Kalahari-Wüste" (Z.M.B.).

Other material examined from: Transvaal: Rustenburg (S.A.M.—Type of *S. exasperans* Pér.). S-W. Africa: Maltahoehe; Voitgrund.

Total material seen: 5 examples.

In his description, Péringuey states that the anterior margin of the clypeus is broadly truncate, whereas in the type specimen it is semicircular. As mentioned in the description given above, the anterior edge of the clypeus is depressed medially with the result that, if viewed from above, the anterior border may appear truncate. This seems a more likely explanation of the apparent discrepancy between the description and the type than that the specimen made available to me was in fact not the type.

I have been able to examine, through the kindness of Dr. K. Delkeskamp of the Zoologisches Museum, Berlin, the *female* type specimen of *S. geilenkeuseri* Brske. I have no doubt that it is conspecific with the type specimen of *S. exasperans* Pér. kindly made available to me by the authorities of the South African Museum, Capetown.

S. meracula Pér.

Schizonycha meracula Péringuey, 1904, p. 211.

Length 9–11 mm. Breadth 4–5 mm.

MALE

Colour testaceous with head and pronotum somewhat darker. *Head* with labral emargination strongly obtuse, rounded medially; anterior clypeal face vertically plane, its row of setiferous punctures irregularly spaced; clypeal carina straight medially, arcuate toward lateral borders; vertex with a feebly indicated transverse carina, carina forwardly angled medially where it usually joins a blunt, weakly raised longitudinal median frontal carina; clypeal punctures elongate; frontal punctures asperose. *Pronotum* with anterior border sinuate toward anterior angles which are directed obliquely backward; posterior angles obtuse; posterior margin with a raised hind border in front of scutellum; lateral borders set with outstanding setae shorter than basal anterior tarsal segment; disc with a longitudinal median impunctate area and two transverse, subbasal, impunctate areas; elsewhere punctate, punctures sparsely set posteriorly, more closely set and asperose anteriorly; intervals indistinctly and finely shagreened. Scutellum transverse; coarsely punctate; intervals with traces of fine shagreening. *Elytra* with punctures separated by more than their own diameter as a rule; intervals thrown into folds in some places, especially near suture; setae in elytral punctures slightly more conspicuous than those of pronotum, but minute nevertheless; lateral borders with stiff, outstanding setae from bases to level of middle of metasternum, setae behind this point minute, inconspicuous. Pygidium quadrate or slightly transverse; sparsely annulate-punctate, punctures more closely set toward upper margin; intervals finely shagreened. Metasternum, episterna and hind coxae with punctures separated by about their own diameter, bearing long, non-squamiform setae; intervals faintly and finely shagreened. Abdominal segments with punctures somewhat scabrose and more closely set toward lateral margins, bearing short, recumbent setae which are, in some cases, slightly squamiform; intervals finely shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment almost as long as the one following; tarsal claws not deeply cleft, the upper ramus distinctly longer than the lower and closely applied to it.

Genitalia (Text-figs. 214 and 215).

FEMALE. Extremely like the *male*, but with a slightly broader body and with shorter hind tarsi as a rule.

Type locality: "Walfish" [Walvis] Bay, S-W. Africa (S.A.M.).

Other material examined from: S-W. Africa: Okahandja; Windhoek (B.M. (N.H.) and F.).

Péringuey also records this species from Ovamboland.

Total material seen: 6 examples.

S. inscita (Pér.).

Atys inscita Péringuey, 1904, p. 254.

Length 10.5 mm. Breadth 5.5 mm.

MALE

Derm pale testaceous with head and pronotum a little darker. *Head* with labral emargination strongly obtuse; anterior clypeal face slightly convex vertically, with

a brief median gap in its row of setiferous punctures; anterior edge of clypeus weakly rounded medially, more strongly so laterally, depressed medially; clypeal carina not strongly raised, straight or feebly biarcuate medially; frontoclypeal suture strongly biarcuate; transverse carina across vertex feebly raised, sometimes replaced by a row of transversely confluent punctures; frons usually with a feebly raised, longitudinal median carina extending from middle of vertex toward middle of frontoclypeal suture; clypeal punctures sparse; frontal punctures closely set, irregularly shaped; antennae nine-segmented. *Pronotum* (Text-fig. 37) with anterior border sinuate laterally, anterior angles obtuse, anterior border directed very slightly backward to them; posterior angles obtuse, very briefly rounded; lateral borders crenulate, setae on them shorter than basal anterior tarsal segment; hind margin without a raised posterior border in front of scutellum; disc with transversely crescentic punctures separated by their own width or more, separation greatest toward base of pronotum; transverse, subbasal, impunctate areas not well-marked; intervals finely shagreened; setae in punctures of pronotal disc minute, inconspicuous. Scutellum equilateral; with scattered, transversely crescentic punctures; intervals finely shagreened. *Elytra* with punctures separated by about their own diameter, each bearing a minute, greyish-white seta; intervals roughened; lateral borders with stiff, outstanding setae from bases to, or almost to apices. Pygidium transverse, very strongly convex; set laterally with irregularly spaced, slightly transversely crescentic punctures, each bearing a small, slightly squamiform seta; pygidium impunctate, or almost so medially; intervals finely shagreened. Metasternum, episterna and hind coxae with emarginate punctures, often separated by their own diameter or more, each bearing a long, fine, non-squamiform seta. Abdominal segments scabroso-punctate laterally, punctures bearing non-squamiform setae of varying length. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment about half as long as second; tarsal claws with lower ramus less than half as long as upper and less robust at base.

Genitalia (Text-figs. 216 and 217).

FEMALE. Unknown to me. Péringuey notes that the abdominal segments are " . . . more pubescent in the *male* than in the *female*". The *female* should have ten-segmented antennae and it is very probable that its pygidium will be much less convex than that of the *male*.

Type locality: Lydenburg, Transvaal (S.A.M.).

Other material examined from: "Caffraria" (N.H.R.M.).

Total material seen: 2 examples.

Péringuey also records Sebakwe, S. Rhodesia as a locality for this species.

The record noted above as "Caffraria" is a specimen included in the series of specimens in the Boheman collection over the name *S. affinis* (p. 207).

S. globa sp. n. (Text-fig. 4)

Length 11-13 mm. Breadth 7-8 mm.

MALE

Colour black, antennae, tibiae and tarsi somewhat reddish, not very shining. *Head* with labral emargination almost rectangular; anterior clypeal face feebly convex vertically, strongly reflexed and with a broad median gap in its row of setiferous punctures; anterior edge of clypeus broadly truncate medially; clypeal carina strongly arcuate; clypeus somewhat shorter in midline than frons; frontal punctures shallow, annulate; clypeal punctures elongate; vertex without a transverse carina. *Pronotum* with anterior border usually slightly sinuate laterally; anterior and posterior angles obtuse; hind margin with an unusually broad raised posterior border in front of scutellum; lateral borders set with outstanding setae shorter than basal anterior tarsal segment; surface with two transverse, subbasal impunctate areas; disc with large punctures, more widely separated medially than toward anterior and lateral margins, each containing an annular groove or an inverted U-shaped groove; disc sometimes with a longitudinal median impunctate area; discal punctures each containing a minute seta, not as long as the diameter of a puncture; intervals finely, but strongly shagreened. Scutellum variably sculptured; finely shagreened, sometimes set with coarse punctures similar to those of pronotal disc. *Elytra* with punctures separated by about their own diameter, each bearing a minute seta similar to those in punctures of pronotal disc; intervals finely, but strongly shagreened, more strongly so toward apices; lateral borders arcuate, outstanding setae confined to between bases and level of middle of metasternum. Body wingless. Pygidium variably annulate-punctate with inconspicuous setae in punctures, setae slightly longer than those of elytral punctures; intervals less strongly shagreened than those of elytra, surface often coarsely wrinkled. Metasternum episterna and hind coxae regularly punctured, punctures separated by about their own diameter and bearing short setae medially, posteriorly and laterally, setae in punctures on anterior parts of metasternum and episterna longer, outstanding; metasternum unusually short, correlated with the wingless condition. Abdominal segments almost impunctate medially, scabroso-punctate laterally; punctures bearing short, appressed setae similar to setae on posterolateral parts of metasternum; intervals finely shagreened laterally, almost smooth toward midline. *Legs* with anterior tibiae tridentate, basal tooth well-marked although much smaller than second tooth; basal hind tarsal segment distinctly shorter than second; tarsal claws with upper ramus much shorter and finer than lower.

Genitalia (Text-figs. 218 and 219).

FEMALE. Very similar to the *male* except for the fact that the hind tarsi have the basal segment as long as or slightly longer than the second segment and the tarsal claws have the upper ramus a little longer than the lower, equally robust and somewhat divergent from it.

Holotype: A *male* in the British Museum (Nat. Hist.). Langkrans, Natal 1956 (Wattle Res[earch] Inst.[itute]).

Paratypes: 4 *males* and 7 *females* with the same data as the holotype. 4 *females* Vryheid, Natal Jan. 1940 'D' Alton (Damaging foliage of young gum tree). 1 *male*, 2 *females* Vryheid, Natal 29.11.1953 (de Schwardt) (Damaging young wattle).

1 *male*, 4 *females* Natal Nov. 1929 (Chief Entomologist, Pretoria). 1 *female* Inyati, Natal Oct. 1955 (Wattle Res. Inst.) (On Wattle). 6 *females* Natal 28.11.1933 (Chief Entomologist, Pretoria). 1 *male*, 1 *female* Natal [Pieter] Maritz. [burg] (S.A.M.).

This species is unusual in that the wingless *male* has the rounded appearance of a *female*. In other species where the *male* has the wings reduced or absent, such as *S. natalensis* Brske. (p. 210), the *male* retains its more oblong form and the elytra still possess humeral callosities. From this it would appear that *S. globa* has been flightless for a longer period than any other known species of the genus.

S. squamifera Walleng.

Schizonycha squamifera Wallengren, 1881, p. 19.

Schizonycha squamifera Wallengr., Péringuey, 1904, p. 216.

Schizonycha lilliputana Brenske, 1898, p. 377.

Schizonycha lilliputana Brsk., Péringuey, 1904, p. 216.

Length 7.5–13 mm. Breadth 4.25–7.5 mm.

MALE

Although this species shows a very strong resemblance to *S. pseudosquamifera* (p. 152), the latter appears in a different section of the key to species because of the presence of a pair of stiff setae along the base of the mentum.

The present species is very closely related to *S. carbonaria* Boh. (below), differing from it by the character mentioned in the key to species and in that the setae along the lateral borders of the pronotum are relatively longer and that the apical borders of the elytra do not possess a fringe of short, fine, downwardly directed setae.

Genitalia (Text-figs. 220 and 221).

FEMALE. Differs from the *male* in being more rounded in outline, having the wings reduced to non-functional vestiges, having the humeral calli of the elytra reduced, having shorter lamellae to the antennal club and in having a less convex pygidium.

Type locality: "Transvaalia, Afr. merid." (Zoologiska Inst., Lund.).

Other material examined from: Transvaal: Johannesburg; Pretoria (B.M. (N.H.) and D.A.S.R.); Zoutpansburg; no exact locality (Fry Coll.). Natal: Estcourt; Frere; unlocalized (Andrewes Bequest). "Int. S. Afr." (Lord Derby Coll.). "Caffraria" (N.H.R.M.).

Other localities given by Péringuey: Cape Province: Stellenbosch. Natal: Durban; Umvoti. S-W. Africa: Ovamboland.

Total material seen: 34 examples.

Péringuey considered *S. lilliputana* Brske. to be a synonym of *S. squamifera*, basing this judgement upon three examples from Frere, Natal. I have also seen material from Frere which appears to differ from *S. squamifera* only in size. I feel that further collecting may establish the existence of some local race or geographical subspecies, but for the present I have adopted the Péringuey decision.

S. carbonaria Boh.*Schizonycha carbonaria* Boheman, 1857, p. 99.*Schizonycha carbonaria* Boh., Péringuey, 1904, p. 215.

Length 9–10.5 mm. Breadth 5.5–6.5 mm.

MALE

Colour black except for antennal and tarsi which are generally piceous. *Head* with labral emargination rightangled or feebly acute; anterior clypeal face vertically plane, median gap in its row of setiferous punctures sometimes bridged by non-setiferous punctures; anterior edge of clypeus truncate, emarginate medially; clypeal carina strongly arcuate; frons longer in midline than clypeus; vertex not carinate, head not sharply angled at vertex; clypeal punctures elongate, their external borders sharply formed; frontal punctures obliquely transverse, usually containing an inverted, U-shaped groove; clypeal and frontal punctures bearing short, narrowly squamiform setae, those of clypeus pointing toward lateral borders, those of frons directed obliquely backward from an anteromedian point. *Pronotum* with anterior border evenly emarginate, anterior angles almost rightangled; posterior angles obtuse; hind margin usually with a narrow, raised posterior border in front of scutellum; lateral borders with stiff, outstanding setae usually slightly shorter than basal anterior tarsal segment; surface without transverse, subbasal, impunctate areas, sometimes with a longitudinal median impunctate area; disc coarsely, but shallowly punctured, punctures usually separated by about their own diameter or less, each containing an inverted U-shaped groove and bearing a seta similar to those on head; intervals finely, but distinctly shagreened. Scutellum slightly broader than long; punctate laterally, punctures similar to those of pronotal disc and similarly setiferous; intervals finely, but distinctly shagreened. *Elytra* shallowly punctured, punctures separated by more than one, sometimes by more than two diameters, bearing setae similar to those of pronotum; intervals finely, but strongly shagreened; outstanding setae along lateral borders from bases to level of hind coxae similar to setae along lateral pronotal borders, setae from level of hind coxae to apicosutural angles much shorter and more closely set, setae directed downward along apical borders. Pygidium transverse (10:13); convex; shallowly annulate-punctate, punctures usually concentrated in dorsolateral areas where they are separated by from one to two diameters; punctures bearing minute, yellowish-testaceous setae, somewhat finer than setae on elytral disc; intervals finely shagreened, though not as strongly as those of elytra. Metasternum, episterna and hind coxae with coarse punctures separated by their own diameter or more, very sparsely arranged on disc of metasternum; most punctures bearing recumbent, narrowly squamiform setae distinctly longer than those of upper surfaces, a few longer outstanding bristles present on anterior parts of metasternum and on medio-basal metasternal area. Abdominal segments with recumbent, slightly squamiform setae in faintly scabrose punctures toward lateral margins, setae intermediate in size between those of metasternal epimera and those of upper surfaces; punctures

much more sparsely set medially; a few long, suberect setae present on penultimate segment; intervals finely shagreened laterally. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment about as long as second; tarsal claws with upper ramus longer than lower and about as broad at base.

Genitalia (Text-figs. 222 and 223).

FEMALE. Wingless; more rounded in outline; with a flatter pygidium and slightly shorter lamellae to the antennal club.

Type locality: "Caffraria" (N.H.R.M.).

Other material examined from: "Caffraria" (N.H.R.M.). Natal: Ulundi; Quela; Frere; Willow Grange, Mooi River; Estcourt; Port Natal; "Natal" (no more detailed locality, Coll. Ertl, B.S.S.). Cape Province: "Griqualand" (B.S.S.). [This last locality is presumably Griqualand East, to the south east of the Drakensberg and immediately south of Natal and not Griqualand West which lies to the west of the Orange Free State.]

Total material seen: 20 examples.

Through the kindness of Prof. R. Malaise, I have been able to examine the five specimens named as *S. carbonaria* in the Boheman collection. The results of this examination are summarized below.

Specimen (1). Data: "Cap. B. Spei, Victorin" and a red "Allotypus" label. This is a male and has had its genitalia dissected out and mounted. It is a specimen of *S. globator* (F.) (p. 141). It does not agree with the description given by Boheman for *S. carbonaria*.

Specimen (2). Data: "Caffraria, J. Wahlb. Type" and a red "Typus" label. This specimen does not agree entirely with the description given by Boheman for *S. carbonaria*; particularly difficult to reconcile are the broad squamae in the pronotal punctures and the "... squamis erectis setiformibus ..." referred to by the describer. This specimen is a *female* example of *S. squamifera* Wallengren (p. 195).

Specimens (3), (4) and (5). All bear the data "Caffraria, J. Wahlb." They are all *female*, agree well with the description of *S. carbonaria* given by Boheman and with *S. carbonaria* as interpreted by Péringuey.

In view of the fact that the specimen bearing the type label does not agree with the original description of the species it would seem advisable to disregard it and to select as a lectotype one of the three examples which do fit the description. This I propose to do and hereby select specimen No. (3) as the lectotype of *Schizonycha carbonaria* Boheman.

S. dissimilis Pér.

Schizonycha dissimilis Péringuey, 1904, p. 220.

Length 10.5–11.5 mm. (Péringuey gives—12.5 mm.). Breadth 5.5 mm.

MALE

Colour pale castaneous with head and pronotum more reddish in tone.

By far the closest relative of this species is *S. continens* Pér. (p. 158), the latter appearing in a different section of the key to species. In fact, if the absence of the

basal setae of the mentum is not noticed in an example of *S. dissimilis*, it will easily key out to *S. continens*.

The description given above for *S. continens* will apply equally well to *S. dissimilis*, but the *male* genitalia of the two species exhibit constant differences. Those of *S. dissimilis* are distinctly less robustly constructed than those of *S. continens*, but the most easily observable difference occurs in the relative lengths of the basal piece and the parameres in the two species. This is clearly shown (Text-figs. 224 and 164) in the profile drawings of the two sets of genitalia.

Genitalia (Text-figs. 224 and 225).

FEMALE. Exhibits the same sexual differences as the female of *S. continens*.

Type locality: Waterberg, Transvaal (S.A.M.).

Other material examined from: Transvaal: Nelspruit. Bechuanaland: Francistown (F. and B.M. (N.H.)).

Total material seen: 6 examples.

As I have noted above, Péringuey gives an upper size limit for this species of 12.5 mm. long. My own experience accords the species a maximum length of 11.5 mm. This discrepancy may well be accounted for by the fact that I have seen only six specimens of the species, but it is also possible that Péringuey based his estimate of the size range upon a mixed series containing examples of *S. continens* (size range 12.5–13 mm. long).

S. saga Pér.

Schizonycha saga Péringuey, 1904, p. 219.

Length 12.5–13 mm. Breadth 6.5–7 mm.

MALE

Colour dark castaneous to piceous. *Head* with labral emargination very slightly obtuse; anterior clypeal face vertically convex, gap in its row of setiferous punctures sometimes bridged by non-setiferous punctures; clypeal carina strongly arcuate; frontoclypeal suture distinct; vertex without, or with a very feebly indicated transverse carina; clypeal punctures slightly elongate; frontal punctures irregular in size and spacing. *Pronotum* with anterior border evenly emarginate; anterior and posterior angles obtuse; hind margin without a raised posterior border in front of scutellum; lateral borders with stiff, outstanding setae often longer than basal anterior tarsal segment; disc, except for two transverse, subbasal impunctate areas and sometimes an irregularly-shaped, small, median impunctate area, closely and deeply punctured, each puncture containing an inverted U-shaped groove and bearing a small, but distinct, squamiform seta; punctures separated by less than one diameter, especially anterolaterally; intervals subcoriaceous. Scutellum transverse; with a row of punctures along each lateral margin; intervals finely shagreened. *Elytra* with punctures separated by about one diameter, each bearing a squamiform seta similar to those of pronotal punctures; lateral borders with long, outstanding setae from bases to level of third abdominal segment; intervals between punctures almost smooth. Pygidium transverse; weakly convex; deeply annulate-

punctate, punctures often separated by less than one diameter; surface somewhat rugulose between punctures; punctures bearing short, outstanding, squamiform setae except near apex where setae are longer and non-squamiform. Metasternum, episterna and hind coxae with long, coarse, yellowish-white setae in punctures, a few large, squamiform setae also present on episterna; punctures deep and annulate. Abdominal segments closely punctured laterally, punctures arranged in irregular transverse rows, punctures on disc also arranged in transverse rows, but less closely set; punctures sometimes bearing non-squamiform setae, but in most cases with short, appressed, squamiform setae, similar to those of elytra although usually a little narrower; intervals slightly wrinkled, but not finely shagreened. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment almost as long as second; tarsal claws with upper ramus as broad as lower and distinctly longer.

Genitalia (Text-figs. 226 and 227).

FEMALE. Extremely similar to the *male*.

Type locality: Worcester, Hex River (S.A.M.).

Other material examined from: Cape Province: Hex River (S.A.M.); Montagu (S.A.M.).

Total material seen: 3 examples.

S. perplexabilis Pér.

Schizonycha perplexabilis Péringuey, 1904, p. 220.

Length 13.5–15 mm. Breadth 6–7.5 mm.

MALE

Colour black to piceous. *Head* with labral emargination acute; anterior clypeal face almost plane, median gap in its row of setiferous punctures broad; clypeal carina strongly arcuate; frontoclypeal suture visible; transverse carina on vertex feebly raised at most; frons and clypeus closely punctured, punctures bearing small, but conspicuous, white, squamiform setae. *Pronotum* with anterior border very feebly sinuate laterally; hind margin with a somewhat irregularly raised posterior border in some examples; setae along lateral borders almost as long as basal anterior tarsal segment; surface without, in most examples, any clearly defined, transverse, subbasal impunctate areas; disc with deeply impressed, annulate punctures, separated by much less than one diameter toward anterior margin, irregularly spaced posteriorly, but often separated by less than one diameter here also; punctures bearing small, but distinct, white, squamiform setae; intervals finely and rather faintly shagreened. Scutellum slightly transverse; punctate laterally; intervals finely shagreened. *Elytra* with punctures separated by slightly less than one diameter, each bearing a white, squamiform seta as on pronotum; intervals finely, faintly and incompletely shagreened; lateral borders with outstanding setae from bases to level of third or fourth abdominal segment. Pygidium weakly convex horizontally, almost flat vertically; transverse; annulate-punctate; intervals variable in size, finely shagreened; squamiform setae in punctures similar to those

of elytra. Metasternum, episterna and hind coxae with, except along anterior margin of metasternum, squamiform setae in punctures; setae at least twice as long as those on upper surfaces; intervals finely and very faintly shagreened. Abdominal segments with punctures arranged in transverse rows, more closely set toward lateral borders; punctures toward lateral margins of first four segments bearing squamiform setae; each segment with a single transverse row of fine, outstanding non-squamiform setae; fifth segment with squamiform setae on disc as well as on lateral margins; intervals between punctures finely shagreened laterally, almost smooth medially. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment almost as long as second; tarsal claws with upper ramus as broad at base as lower and distinctly longer.

Genitalia (Text-figs 228 and 229).

FEMALE. Very similar to the *male*, but usually slightly broader; the antennal club has relatively shorter lamellae and the basal hind tarsal segment is quite as long as the second segment.

Type locality: Sebakwe, S. Rhodesia (S.A.M.).

Other material examined from: S. Rhodesia: Bulawayo; Lonely Mine; Umtali; Sebakwe (S.A.M.); Trelawney (D.A.S.R.); Salisbury (D.A.S.R.).

Total material seen: 11 examples.

S. filiola Moser

Schizonycha filiola Moser, 1917, p. 254.

Length 9-9.5 mm. Breadth 4.5 mm.

MALE

This species is very closely related to *S. infans* (Pér.) (p. 202), separated from it as indicated in the key to species and by the following:

The hind margin of the pronotum has a feebly raised posterior border in front of the scutellum; the pronotal punctures are coarser; the setae along the lateral borders of the elytra are all short and subrecumbent except for a few near the shoulders. The metasternum is even more sparsely punctured than that of *S. infans*, the long setae on its anterior parts being shorter than those of *S. infans* and less densely arranged.

Genitalia (Text-figs. 230 and 231).

FEMALE. Differs from the *male* in being wingless, more rounded in outline and in having a relatively much shorter metasternum. The lamellae of the antennal club are much shorter. The tarsi are shorter and the basal segment of the hind tarsi is only a little shorter than the second segment whereas in the *male* it is about half as long as the second segment. The tarsal claws of the *female* all have the upper ramus longer than the lower and somewhat divergent from it.

Type locality: Port Natal (Z.M.B.).

Other material examined from: Natal: Frere; Van Reenen, Drakensberg; unlocalized (Nevinson coll.).

Total material seen: 12 examples.

S. dilucida Brske.*Schizonycha dilucida* Brenske, 1898, p. 359.*Schizonycha exacerbens* Péringuey, 1904, p. 213 (**syn. nov.**).

Length 11.5–13 mm. Breadth 5.75–6.75 mm.

MALE

Derm testaceous with head and pronotum darker. *Head* with labral emargination strongly acute; anterior clypeal face shallowly convex vertically, with a rather narrow median gap in its row of setiferous punctures; anterior edge of clypeus straight medially, broadly rounded laterally to eyes; clypeal carina strongly raised, evenly arcuate; frontoclypeal suture clearly visible medially, more or less overlain laterally by clypeal carina; vertex sharply angled and with a raised carina across middle five sevenths; clypeal punctures separated by less than one diameter, usually elongate and with their internal borders only sharply defined, bearing minute, white setae; frontal punctures transverse or obliquely transverse, separated longitudinally by a little less than one transverse diameter, transversely by less than one longitudinal diameter, bearing minute setae slightly more conspicuous than those of clypeus. *Pronotum* with anterior border sinuate laterally, directed obliquely backward to anterior angles; posterior angles obtuse; posterior margin with a raised hind border in front of scutellum; lateral borders with outstanding setae shorter than basal anterior tarsal segment; surface with clearly-marked, transverse, subbasal impunctate areas; punctures of disc slightly transverse, each containing an M-shaped groove and bearing a small, white, narrowly squamiform seta almost as long as the diameter of a puncture; separation of punctures varying from less than one to about two diameters; punctures along anterior margin smaller than those on disc, asperose; intervals smooth or sometimes finely shagreened. *Scutellum* slightly transverse (8:9); punctures more or less confined to lateral margins, circular or slightly transverse, bearing setae slightly smaller than those of pronotal punctures; intervals finely shagreened. *Elytra* with punctures separated by more or less their own diameter, bearing setae similar to those of pronotum; intervals between punctures almost smooth, with faint traces of shagreening; lateral borders with stiff, outstanding setae confined to between bases and level of middle of metasternum. *Pygidium* transverse (c. 5:6); strongly convex; punctures more or less annulate, separated by from less than one to almost two diameters, bearing minute, white, outstanding setae; intervals finely shagreened. *Metasternum* with punctures separated by more than their diameter for the most part, mediobasal area even more sparsely punctured; punctures on anterior half bearing long, fine, yellowish setae punctures elsewhere bearing short, white, lanceolate, appressed, squamiform setae, about twice as long as the diameter of a puncture; metepisterna with punctures separated by one diameter or less, bearing setae similar to those on posterior parts of metasternum; hind coxae with punctures separated by about one diameter and bearing setae similar to those of metepisterna; intervals between punctures of metasternum, episterna and hind coxae smooth or finely and faintly shagreened.

Abdominal segments with annulate, faintly asperose punctures separated by from one to about two diameters toward and along lateral margins, bearing setae intermediate in size between those of hind coxae and those of elytra ; punctures toward midline of abdominal segments progressively more sparsely arranged, reduced across middle to a single row of punctures bearing long, more or less outstanding, yellowish setae and a few other, scattered punctures bearing minute, inconspicuous setae ; intervals smooth. *Legs* with anterior tibiae tridentate ; basal hind tarsal segment about seven tenths as long as second ; tarsal claws with upper ramus longer than lower, almost as broad at base, emarginate beneath apex.

Genitalia (Text-figs. 232 and 233).

FEMALE. Very like the *male*.

Type locality : Bagamoyo, Tanganyika T. (Z.M.B.).

Other material examined from : S. Rhodesia : Sebakwe (Type of *S. exacerbens* Pér.—S.A.M.). Filabusi. Port. E. Afr. : Caia, Zambesi ; unlocalized. Nyasaland : Chiromo. Tanganyika T : Bagamoyo (Z.M.B.).

Total material seen : 8 examples.

The synonymy of the two species is based upon a personal examination of the two *male* holotypes.

S. infans (Pér.)

Atys infans Péringuey, 1904, p. 256.

Length 10–10.5 mm. Breadth 5–5.5 mm.

MALE

Colour pale testaceous with head and pronotum slightly darker. *Head* with labral emargination obtuse ; anterior clypeal face vertically plane, median gap in its row of setiferous punctures moderately broad ; clypeal carina arcuate medially ; frontoclypeal suture clearly visible ; transverse carina on vertex scarcely raised, grooved behind ; clypeal punctures shallow, elongate ; frontal punctures obliquely transverse, shallow, their anteromedian borders slightly raised. *Pronotum* with anterior border strongly sinuate laterally, anterior angles obtuse, anterior border directed slightly backward toward them ; posterior margin with a sharply raised hind border in front of scutellum ; lateral borders shallowly crenulate, briefly sinuate before hind angles, set with setae shorter than basal anterior tarsal segment ; surface with short, narrow, transverse subbasal impunctate areas ; disc with close, coarse, round punctures bearing small setae which are slightly squamiform toward lateral margins of pronotum ; intervals finely shagreened. Scutellum almost as long as broad (7 : 8) ; coarsely punctured along lateral margins ; punctures bearing short, white, narrowly squamiform setae ; intervals finely and rather faintly shagreened. *Elytra* with punctures usually separated by their own diameter (by more toward apices) and bearing minute, white, slightly squamiform setae ; intervals very faintly coriaceous ; lateral borders set with outstanding setae from bases to about level of third abdominal segment, becoming progressively shorter toward this point, setae thence to apicosutural angles small, as short as on elytra, but finer. Pygidium

transverse (7:9); with coarse, sparsely set, annulate punctures, more closely set basally; punctures bearing small, white, scarcely squamiform setae, a little finer than those of elytra; intervals finely and often faintly shagreened. Metasternum, episterna and hind coxae rather sparsely punctured, intervals often greater than one diameter, smooth; short, squamiform setae present on posterior half of episterna, posterolateral areas of metasternum and lateral parts of hind coxae, the last being longer than those elsewhere; setae in other areas long, non-squamiform. Abdominal segments almost impunctate medially, more obviously punctured laterally; punctures usually bearing setae similar to those on posterior halves of metasternal epimera; intervals finely shagreened laterally, smooth medially. Legs with anterior tibiae strongly tridentate; basal hind tarsal segment half as long as second; upper ramus of tarsal claws slightly more than half as long as second and much finer.

Genitalia (Text-figs. 234 and 235).

FEMALE. I have been able to examine a single example which I believe to be the *female* of *S. infans* (Pér.) It differs from the *male* in being wingless, more rounded in outline, having very much shorter lamellae to the antennal club and in having the upper ramus of all the tarsal claws slightly longer than the lower and somewhat divergent from it.

Type locality: Johannesburg, Transvaal (S.A.M.).

Other material examined from: Transvaal: Johannesburg. And "Cape of Good Hope" (ex coll. Reiche) ♀.

Péringuey records Frere, Natal as a locality for this species.

Total material seen: 7 examples.

S. corrosa Burm.

Schizonycha corrosa Burmeister, 1855, p. 270.

Schizonycha corrosa Burm., Péringuey, 1904, p. 252.

Atys corrosa (Burm.), Andreae, 1933, p. 106.

Atys humilis Péringuey, 1904, p. 258.

Atys humilis Pér., Andreae, 1933, p. 106.

Atys ovatula Pér. (*nec* Brenske), 1904, p. 255 (partim *female*).

Atys ovatula Pér. (*nec* Brenske), Andreae, 1933, p. 106 (partim *female*).

Length 12-13 mm. Breadth 6.5-7.5 mm.

MALE

Colour testaceous to dark castaneous with head and pronotum often slightly darker. Head with labral emargination almost rightangled; anterior clypeal face reflexed medially, faintly convex vertically and with a broad median gap in its row of setiferous punctures; clypeal carina strongly arcuate medially, overlying frontoclypeal suture laterally; basal cephalic carina scarcely raised, grooved behind; clypeus with elongate punctures; frontal punctures transverse, containing inverted, U-shaped grooves with the arms of the "U" directed posterolaterally. Pronotum (Text-fig. 33) with anterior border feebly sinuate laterally; anterior angles almost

rectangular; posterior margin with a raised hind border in front of scutellum; lateral borders crenulate for anterior half, almost without notches in posterior half, abruptly sinuate shortly before posterior angles; lateral borders bearing setae generally shorter than basal anterior tarsal segment; surface without well-marked transverse, subbasal, impunctate areas; disc with coarse, circular, annulate or grooved punctures, separated by more or less one diameter and bearing minute, inconspicuous setae; a longitudinal median impunctate area usually present; punctures more closely arranged along extreme anterior margin than elsewhere; intervals finely, but quite strongly shagreened. Scutellum transverse (5:7); a single row of coarse punctures present near each lateral margin; punctures bearing minute, inconspicuous setae; intervals finely shagreened. *Elytra* with punctures separated by about one diameter or slightly more except along sutural margins where separation is often by much more than one diameter; punctures bearing setae very slightly more conspicuous than those of pronotum; intervals finely shagreened except for humeral calli which are smooth; lateral borders set with a few outstanding setae near shoulders, setae elsewhere on lateral and apical borders minute, inconspicuous. Pygidium slightly transverse; feebly convex; surface set with sparsely arranged, annulate punctures, somewhat more closely set basilaterally, bearing minute, outstanding setae; intervals finely and faintly shagreened, broadly longitudinally rugulose in some examples. Metasternum, episterna and hind coxae annulate-punctate; punctures on coxae separated by about their own diameter or more and bearing short, fine, subrecumbent setae; intervals finely shagreened; intervals of metasternum and episterna more variable in size, finely shagreened; punctures bearing short setae posterolaterally, much longer bristles anteriorly. Abdominal segments very sparsely setoso-punctate medially, more closely punctured toward lateral margins; punctures each with a trace of a tubercle on their anterior border, setae in punctures a little longer and finer than those of elytra, but not as long as setae on hind coxae; intervals finely shagreened along lateral margins, almost smooth medially. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment slightly more than half as long as second (6:11); upper ramus of all tarsal claws much finer and about half as long as lower.

Genitalia (Text-figs. 236 and 237).

FEMALE. Wingless; more rounded in outline than the *male*; with much shorter lamellae to the antennal club, shorter hind tarsi and the upper ramus of all tarsal claws is at least as long as the lower.

Type locality: S. Africa (coll. Ecklon) (Univ. Halle).

Other material examined from: Cape Province: Mossel Bay; Cape; E. London (S.A.M.); Stutterheim (S.A.M.); "Pr. b. sp." (Krebs) (Z.M.B.).

Péringuey gives Seymour and Grahamstown in Cape Province as localities for this species. (As *A. humilis*.)

Total material seen: 10 examples.

The Burmeister collection in the Martin Luther University at Halle contains a single *female* over the name *S. corrosa*. It agrees with the description given by Burmeister and there is no reason why it should not be regarded as the holotype of *S. corrosa*.

Péringuey found himself unable to interpret the Burmeister description and in fact redescribed *S. corrosa* under the name *Atys humilis* Pér. Andreae, writing in 1933, makes this clear, stating at the same time that he had been able to examine the Burmeister material of *S. corrosa* and so had been able to compare it with the Péringuey series of *A. humilis*. Andreae also noticed that Péringuey had broadened the scope of Brenske's *Schizonycha ovatula* to include *S. corrosa* Burm.

S. minima Pér.

Schizonycha minima Péringuey, 1904, p. 218.

Length 9 mm. Breadth 4.25 mm.

MALE

Derm very dark red-brown, shining. *Head* with labral emargination slightly acute; anterior clypeal face vertically plane, median gap in its row of setiferous punctures moderate, bridged by non-setiferous punctures; anterior edge of clypeus truncate medially; clypeal carina strongly arcuate, angled medially; frontoclypeal suture clearly visible; clypeal punctures elongate; frontal punctures transverse, each containing an inverted U-shaped groove. *Pronotum* with anterior border evenly emarginate; anterior and posterior angles obtuse, the former only slightly so; hind margin with a trace of a raised posterior border in front of scutellum; lateral borders set with coarse setae usually shorter than basal anterior tarsal segment; surface with two very narrow, transverse, subbasal impunctate areas; disc very coarsely annulate-punctate, punctures for the most part separated by much less than their own diameter, each bearing a conspicuous, squamiform seta; intervals smooth except for a few scattered, minute punctures. *Scutellum* with a few coarse punctures, each bearing a white, squamiform seta. *Elytra* deeply and closely punctured, punctures separated by less than their own diameter, bearing setae similar to those in pronotal punctures; intervals almost smooth; lateral borders with stiff, outstanding setae near shoulders, a few outstanding setae present toward apical borders, but very widely separated. *Metasternum*, *episterna* and hind coxae setoso-punctate, setae long and stiff on anterior parts of metasternum, squamiform, but longer than those of upper surfaces posterolaterally; *episterna* and hind coxae with long, squamiform setae, interspersed with a few non-squamiform bristles. *Abdominal segments* annulate-punctate, more closely so laterally, punctures bearing elongate, squamiform setae similar to those of hind coxae; median areas of abdominal segments with a few squamiform setae and each with a transverse row of non-squamiform bristles. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment slightly shorter than second; lower ramus of tarsal claws more than half as long as upper and closely applied to it.

Genitalia (Text-fig. 238) (after Péringuey).

FEMALE. Unknown.

Type locality: Delagoa Bay (S.A.M.).

The *male* type specimen is the sole example of this unusual species known to me.

S. affinis Boh.*Schizonycha affinis* Boheman, 1857, p. 103.*Schizonycha furva* Péringuey, 1904, p. 242 (*syn. nov.*).*Schizonycha natalica* Moser, 1917, p. 253 (*syn. nov.*).

Length 10–12.5 mm. Breadth 5.5–6.5 mm.

MALE

Derm light to dark testaceous with head and pronotum usually darker. *Head* with labral emargination weakly acute; anterior clypeal face reflexed, feebly convex vertically, median gap in its row of setiferous punctures usually bridged by non-setiferous punctures; clypeal carina usually strongly arcuate; frontoclypeal suture clearly marked; vertex without a transverse carina and not sharply angled; clypeal punctures slightly elongate; frontal punctures obliquely transverse. *Pronotum* with anterior border strongly sinuate laterally, slightly forwardly arcuate medially; posterior angles briefly rounded; hind margin without a raised posterior border in front of scutellum; lateral borders feebly crenulate, notches widely separated, setae almost as long as basal anterior tarsal segment; surface with transverse, subbasal impunctate areas usually very narrowly marked; a longitudinal median impunctate area usually present also; discal punctures containing an inverted U-shaped groove, usually arranged in groups, separation often by less than one diameter, punctures bearing minute, inconspicuous setae; intervals smooth. Scutellum transverse (4:5); punctate laterally; punctures bearing minute setae; intervals smooth. *Elytra* with punctures separated by more or less one diameter, bearing setae as on pronotum; intervals smooth; lateral borders with short outstanding setae from bases to about level of apical border of fourth abdominal segment. *Pygidium* transverse; variably annulate-punctate; intervals sometimes more, sometimes less than one diameter, smooth; punctures bearing small setae similar to those of elytra. *Metasternum*, *episterna* and hind coxae with long, narrow, squamiform setae posteriorly and posterolaterally; longer, non-squamiform setae present along anterior margins of *episterna* and *metasternum*; intervals smooth. Abdominal segments more closely punctate laterally than toward mid-line; setae in punctures non-squamiform medially, slightly squamiform laterally, especially anterolaterally; intervals faintly shagreened along extreme lateral margins, smooth elsewhere. *Legs* with anterior tibiae tridentate, basal tooth very blunt as a rule; basal hind tarsal segment a little more than half as long as second; tarsal claws with upper ramus about half as broad as and somewhat shorter than lower.

Genitalia (Text-figs. 239 and 240).

FEMALE. Very similar to the *male*, but the antennal club has shorter lamellae. Type locality: "In regione fluvii Gariepis" (N.H.R.M.).

Other material examined from: Natal: Indaleni; Durban; Weenen; Pietermaritzburg; Port Natal (B.M. (N.H.) and N.H.R.M.); "Natal" (Unlocalized, B.M. (N.H.) and B.S.S.); Pinetown (Holotype of *S. natalica* Moser, Z.M.B.); Eshowe, Zululand. "? Cape Colony" (Holotype of *S. furva* Pér., S.A.M.).

Total material seen: 21 examples.

Through the kindness of Prof. Malaise, I have been able to examine the seven specimens conserved in the Naturhistoriska Riksmuseum, Stockholm, over the name *S. affinis* Boh. As their data shows, at least six, if not all of these specimens could have been seen by Boheman when he described the species. Two of the specimens bear white "Type" labels, thought to have been added by Boheman himself, although most probably at a later date and not at the time when he described the species. An account of my findings in respect of these specimens and the other five is given below :

Specimen (1). Data : "Caffraria, J. Wahlb. Type ♀" and a red label with the printed word "TYPUS". This specimen agrees reasonably well with Boheman's description.

Specimen (2). Data : As for (1), but with no sex indicated, without a "Type" label and with a red "ALLOTYPUS" label. This specimen is a *male* and has had the genitalia dissected out and mounted by Péringuey. It differs on several counts from the description of *S. affinis* given by Boheman, but is obviously a specimen upon which Péringuey based his interpretation of *S. affinis* (see p. 103).

Specimen (3). Data : As for (2), but without an "ALLOTYPUS" label. This specimen is a *female* example of *S. languens* Pér. (p. 101). It does not agree with Boheman's description of *S. affinis*.

Specimen (4). Data : As for (3). This is a *female* example of the species interpreted by Péringuey as *S. affinis*.

Specimen (5). Data : As for (3). This specimen does not agree with the description of *S. affinis*. It is a *male* example of *S. inscita* (Pér.) (p. 192).

Specimen (6). Data : As for (1), but without a red "TYPUS" label. This specimen agrees with Boheman's description and is conspecific with specimen (1).

Specimen (7). Data : "Pt. Nat. Dohrn." This is another *female* example, conspecific with specimens (1) and (6).

Specimens (1), (6) and (7) agree with Boheman's description. The "Port Natal" specimen does not agree in locality with the distribution given after the specific diagnosis. "Caffraria" on the other hand is sufficiently broad a term to include the upper reaches of the Orange River, visited by Wahlberg on his journeys.

As no published citation of a holotype exists, the two examples, (1) and (6), may be considered as equal syntypes of Boheman's species. They are the only specimens in the Boheman collection to which the name *S. affinis* may properly be applied. This being so, I hereby select one of them, specimen (1), as the lectotype of *Schizonycha affinis* Boheman.

S. fimbriata Brske.

Schizonycha fimbriata Brenske, 1898, p. 377.

Schizonycha vaalensis Péringuey, 1904, p. 231 (*syn. nov.*).

Length 14-15 mm. Breadth 7-8 mm.

MALE

Colour castaneous ; shining. *Head* with labral emargination acute ; anterior clypeal face vertically plane, with a median gap in its row of setiferous punctures ;

anterior edge of clypeus emarginate medially; clypeal carina strongly arcuate, sometimes angled medially; no trace of a transverse carina present on vertex; frons slightly longer in midline than clypeus; punctures of clypeus elongate; frontal punctures obliquely transverse, asperose. *Pronotum* with anterior border sinuate laterally, forwardly arcuate medially (as in Text-fig. 31); anterior and posterior angles obtuse; posterior margin with an ill-defined raised hind border in front of scutellum; disc annulate-punctate, punctures irregularly spaced, usually more closely set anteriorly, each with a minute, pale yellowish-white seta; transverse, subbasal inpunctate areas usually present, although not always clearly defined; intervals between coarse punctures finely, often extremely faintly shagreened; lateral borders with outstanding setae not quite as long as basal anterior tarsal segment. Scutellum shallowly punctate laterally; intervals finely shagreened. *Elytra* with punctures separated by slightly less than their own diameter in many instances, bearing setae similar to those on pronotum; intervals smooth, or almost so; lateral borders with outstanding setae from bases almost to apical borders, long and conspicuous near shoulders, shorter and less conspicuous for apical three fourths. Pygidium irregularly annulate-punctate, punctures bearing setae similar to, but slightly finer than those of elytral punctures; intervals slightly roughened as a rule. Metasternum, episterna and hind coxae with annulate punctures bearing long, fine, pale yellow setae, those on anterior parts of metasternum longer than those elsewhere. Abdominal segments more closely punctured laterally than on disc, punctures bearing fine setae of varying lengths, the shorter ones similar to the setae of the elytra, the longer setae usually disposed along the lateral margins of the segments, but sometimes, particularly on the penultimate segment, there is also a transverse row of longer bristles continuing right across the segment; intervals with traces of shagreening along lateral margins, almost smooth except for a faintly wrinkled effect medially. *Legs* with anterior tibiae strongly tridentate; basal hind tarsal segment about four fifths as long as second; tarsal claws with upper ramus slightly shorter than lower on anterior legs, slightly longer than lower ramus on middle and hind legs (Text-fig. 12).

Genitalia (Text-fig. 241).

FEMALE. Very similar to the *male*, but the antennae have shorter lamellae making up the club; the pygidium is generally less transverse and more convex.

Type locality: Transvaal (Z.M.B.).

Other material examined from: Cape Province: Unlocalized (Holotype of *S. vaalensis* Pér. (S.A.M.). Natal: New Hanover; unlocalized (B.S.S.). Transvaal: Potchefstroom (F.); unlocalized (Nevinson coll.). S. Africa: Unlocalized (Pascoe coll.).

Total material seen: 10 examples.

Péringuey records the following localities for this species: Cape Province: Kimberley; Vaal River; Barkly West.

Péringuey remarked that he had been able to compare a typical example of *S. africana* Klug (*nec* Cast.) with his species. He stated that the two were almost identical. I have seen the material of *S. africana* Klug (= *S. salaama* Brske.) in the Zoologisches Museum, Berlin, and find it sufficiently different from *S. fimbriata*

Brenske to appear in quite a different place in the key to species given at the beginning of this paper.

Péringuey also stated that he believed *S. fimbriata* (which of course he referred to as *S. vaalensis*) to have a restricted distribution in the neighbourhood of the Vaal River. This observation would seem to have been contradicted by further collecting. It is unlikely that any confusion exists as to the identity of this species, at least as far as the *males* are concerned for, as Péringuey recorded, the genitalia (Text-fig. 241), are very peculiar in shape.

S. russula Boh.

Schizonycha russula Boheman, 1857, p. 100.

Schizonycha russula Boh., Péringuey, 1904, p. 239.

Schizonycha howickiana Péringuey, 1908, p. 680 (*syn. nov.*).

Length 9–12 mm. Breadth 5–6.5 mm.

MALE

Colour variable from pale testaceous to dark castaneous. *Head* with labral emargination almost rightangled; anterior clypeal face reflexed, vertically convex, with a wide median gap in its row of setiferous punctures; anterior edge of clypeus slightly emarginate medially; clypeal carina arcuate; frontoclypeal suture visible, joining clypeal carina near lateral borders; vertex without a transverse carina, moderately sharply angled; clypeal punctures slightly elongate, closely set, often separated by less than one transverse diameter, their internal borders only being sharply formed; frontal punctures more or less circular, their anterior borders more sharply formed than any others, separation by much less than one diameter; both clypeal and frontal punctures bearing minute, white setae. *Pronotum* with anterior border slightly sinuate laterally, but with anterior angles directed forward; posterior angles obtuse; posterior margin with a raised hind border in front of scutellum; lateral borders with outstanding setae longer than basal anterior tarsal segment; surface without transverse, subbasal, impunctate areas; punctures of disc more or less circular, annulate or containing an inverted U-shaped groove, separated by much less than one diameter as a rule, usually more widely separated toward lateral and hind borders; punctures bearing white, narrowly squamiform setae almost as long as the diameter of a puncture; intervals finely and usually rather faintly shagreened. Scutellum transverse (c. 1:2); annulate-punctate; punctures smaller than those of pronotum, often confined to lateral margins, bearing minute setae about as long as the diameter of a puncture; intervals finely shagreened. *Elytra* with punctures often separated by less than one diameter on disc, usually by more than one diameter toward apices, each bearing a small, white, slightly squamiform seta slightly shorter than the maximum diameter of a puncture; intervals almost or quite smooth; lateral borders with long, outstanding setae from bases to level of first or second abdominal segment, setae behind this point much smaller, scarcely discernible near apices. Pygidium slightly transverse (c. 95:120); shallowly convex; often longitudinally wrinkled; shallowly and sparsely annulate-

punctate, punctures usually separated by more than one diameter and bearing minute, white setae often no longer than the diameter of the ring within the puncture; intervals finely shagreened. Metasternum, episterna and hind coxae with fine, yellowish-white setae in punctures; intervals finely and faintly shagreened; metasternal disc with a more or less clearly defined impunctate area on each side of middle. Abdominal segments almost impunctate across middle; punctures toward and along lateral margins separated by from one to about two diameters, annulate, often weakly asperose, bearing appressed setae varying in length by from one to about three puncture diameters; intervals variably sculptured, usually almost or quite smooth across middle, finely and more or less clearly shagreened toward lateral borders. *Legs* with anterior tibiae tridentate; basal hind tarsal segment three fourths as long as second; tarsal claws with upper ramus shorter and finer than lower.

Genitalia (Text-figs. 244 and 245).

FEMALE. Differs from the *male* in having the wings much reduced, being more founded in outline and having negligible humeral calli on the elytra. Also the lamellae of the antennal club are shorter, the basal hind tarsal segment is as long as the one following, the tarsal claws have the upper ramus longer than the lower and somewhat divergent from it and the pygidium is usually more transverse (c. 9:13).

Type locality: "Prope fluvium Limpopo" (N.H.R.M.).

Other material examined from: Transvaal: Brakpan; Nigel; Johannesburg (F. and B.M. (N.H.)); Pretoria (F. and B.M. (N.H.)); Bethal; Heidelberg; Vereeniging. Natal: Howick (Holotype of *S. howickiana* Pér. (S.A.M.)). Cape Province: Port Elizabeth (S.A.M.).

Total material seen: 18 examples.

I have seen the two examples named *S. russula* in the Boheman collection. They are both of the same species, agree with the original description given by Boheman and one of them, a *male*, has had its genitalia dissected out and mounted and is obviously the basis of Péringuey's interpretation of the species. The other example is a *female* and bears the data "Caffraria, J. Wahlb. Type, ♀ TYPUS".

The holotype of *S. howickiana* Pér., kindly made available to me by the authorities of the South African Museum, is a specimen of *S. russula*. Its aedeagus is slightly lighter in construction than is usual in *S. russula*, but that is all.

S. natalensis Brske.

Schizonycha natalensis Brenske, 1898, p. 352.

Schizonycha natalensis Brske., Péringuey, 1904, p. 238.

Length 11.5-14 mm. Breadth 6.5-7.5 mm.

MALE

This species is closely related to the foregoing, differing as indicated in the key to species and in the following respects. The colour is usually dark castaneous to

piceous. The *males* of *S. natalensis* sometimes have reduced, non-functional wings as well as the *females* and the humeral calli of the elytra may, at the same time be less well-marked. The labral emargination is acute. The *pronotum* (Text-fig. 34) is usually less closely punctured than is the case with *S. russula*. The lateral borders of the *elytra* usually have stiff, outstanding setae between the bases and the level of the middle of the metasternum only. The pygidium is more transverse (c. 10 : 15). The setae in the punctures on the posterolateral parts of the metasternum, on the episterna and on the hind coxae are short, often not more than twice as long as the diameter of a puncture, and appressed.

Genitalia (Text-figs. 242 and 243).

FEMALE. Differs from the *male* in the same way as the *female* of *S. russula* differs from the *male* of that species.

Type locality : Natal (no exact locality) (Z.M.B.).

Other material examined from : Natal : Durban ; Malvern ; Kloof ; Port Natal ; Southbroom ; Intentiveni ; unlocalized (F. and B.M. (N.H.)).

Total material seen : 21 examples.

S. ovatula Brenske

Schizonycha ovatula Brenske, 1898, p. 360.

Atys ovatula Péringuey (*nec* Brenske), 1904, p. 255 (pars ♀).

Schizonycha immixta Péringuey, 1904, p. 230.

Atys immixta (Pér.), Andreae, 1933, p. 106.

Atys ovatula (Brske.), Andreae, 1933, pp. 105, 106.

Length 11.5–13.5 mm. Breadth 7–8 mm.

MALE

Colour usually pale testaceous with head and pronotum slightly darker. *Head* with labral emargination almost rightangled ; anterior clypeal face feebly convex vertically, median gap in its row of setiferous punctures broad ; clypeal carina arcuate ; frontoclypeal suture well-marked ; vertex not sharply angled, without a transverse carina ; frons parallel-sided from vertex to frontoclypeal suture ; clypeal punctures slightly elongate ; frontal punctures discrete, annulate. *Pronotum* with anterior border slightly sinuate laterally ; posterior margin with a raised hind border in front of scutellum ; lateral borders shallowly crenulate, briefly sinuate shortly before obtuse posterior angles, set with setae shorter than basal anterior tarsal segment ; surface without transverse, subbasal, impunctate areas ; discal punctures annulate, separated by from one half to one and one half diameters, each bearing a minute, inconspicuous seta ; intervals smooth. Scutellum transverse (c. 3 : 4) ; punctate laterally, occasionally with a few median punctures present as well ; intervals usually very faintly shagreened. *Elytra* with punctures separated by about their own diameter, bearing minute setae ; intervals usually almost smooth ; lateral borders with outstanding, yellow setae near shoulders, setae much shorter and less conspicuous along posterior half of each lateral border. Pygidium transverse, somewhat more convex in lower than in upper half ; very variably annulate-

punctate, punctures much more closely set in upper half, bearing minute setae; intervals frequently rugulose. Metasternum, episterna and hind coxae densely clothed with long, yellow hairs; punctures on anterior half of metasternum usually separated by less than their own diameter, punctures a little less closely set posteriorly; intervals smooth. Abdominal segments sparsely punctured, separation considerably greater than the diameter of a puncture, especially toward midline; punctures with anteromedian borders slightly tuberculate, bearing small, non-squamiform setae; intervals smooth medially, faintly shagreened toward lateral borders. *Legs* with anterior tibiae usually strongly tridentate; basal hind tarsal segment about five eighths as long as second; lower ramus of middle and hind tarsal claws finer than upper and a little more than half as long; lower ramus of anterior tarsal claws much broader and longer than upper.

Genitalia (Text-figs. 246 and 247).

FEMALE. Differs from the *male* in that it is a more rounded, wingless form with little or no evidence of humeral calli on the elytra and with a greatly shortened metasternum. The antennae have very short lamellae making up the club, the tarsi are relatively shorter and all the claws have the upper ramus longer than the lower. The setae of the metasternum, episterna and hind coxae are short and more or less appressed.

Type locality: Port Elizabeth, Cape Province (Z.M.B.).

Other material examined from: Cape Prov.: Port Elizabeth; East London; Kingwilliamstown; Pirie Bush; Grahamstown; Salem; "Cap. b. Spei" (B.M. (N.H.) and B.S.S.); "Pr. b. Sp." (Krebs) (Z.M.B.). Natal: Unlocalized.

Total material seen: 36 examples.

Péringuey records in addition Transkei, Cape Province, as a locality for *S. immixta*, the type locality of which is Grahamstown.

Brenske knew only the *female* of this species. Péringuey, in revising *Schizonycha* broadened the scope of Brenske's species to include the *female* of *S. corrosa* Burm. (p. 203) and described the *male* of *S. ovatula* as a new species, *S. immixta*. Both these errors were noticed and corrected by Andreae in his revision of the genus *Atys* Reiche.

S. fraudigera Pér.

Schizonycha fraudigera Péringuey, 1904, p. 231.

Schizonycha egens Péringuey, 1904, p. 235 (*syn. nov.*).

Length 10.5–11 mm. Breadth 5–5.5 mm.

MALE

Colour variable from pale testaceous to castaneous. *Head* with labral emargination approximately rightangled; anterior clypeal face not or very slightly convex vertically, a broad median gap present in its row of setiferous punctures; anterior edge of clypeus broadly truncate or slightly emarginate medially; clypeal carina arcuate medially, overlying frontoclypeal suture laterally; vertex without a transverse carina, not sharply angled; frons parallel-sided, slightly longer in midline

than clypeus ; clypeal punctures elongate ; frontal punctures closely set, irregular in outline. *Pronotum* with anterior border sinuate laterally ; anterior and posterior angles obtuse ; hind margin with a raised posterior border in front of scutellum ; lateral borders feebly crenulate, set with setae scarcely more than half as long as basal anterior tarsal segment ; surface with transverse impunctate subbasal areas indistinctly marked as a rule ; disc more or less evenly annulate-punctate, punctures separated by less than their own diameter as a rule, each bearing a minute, narrowly squamiform seta ; intervals smooth except for microscopic punctures. Scutellum slightly elongate ; punctured laterally, each puncture bearing a seta similar to those of pronotal punctures ; intervals finely shagreened. *Elytra* together about one and a half times as long as broad ; punctures of disc and margins separated by about their own diameter, each bearing a small seta similar to those of pronotum ; intervals smooth ; outstanding setae along lateral borders confined to near shoulders. Pygidium strongly transverse ; closely and deeply annulate-punctate ; punctures variably separated, bearing setae similar to those of elytra ; intervals usually finely shagreened, especially toward upper margin. Metasternum, episterna and hind coxae with short, sparsely set, recumbent, slightly squamiform setae posteriorly and laterally, longer, more or less outstanding bristles present in punctures on anterior parts of metasternum ; intervals between punctures smooth or extremely faintly shagreened. Abdominal segments more or less regularly scabroso-punctate, more closely so toward lateral margins ; punctures bearing narrowly squamiform setae, distinctly longer than those of elytra ; a few long, non-squamiform setae present also, the longest occurring on the penultimate segment ; intervals smooth except along extreme lateral margins where the surface shows traces of shagreening in some examples. *Legs* with anterior tibiae strongly tridentate ; basal hind tarsal segment little more than half as long as second ; upper ramus of all tarsal claws shorter and much finer than lower.

Genitalia (Text-figs. 248 and 249).

FEMALE. Differs from the *male* in being wingless, more rounded in outline and with a much reduced metasternum ; in having much shorter lamellae making up the antennal club ; in having shorter tarsi with the upper ramus of the claws as broad as the lower and longer and the basal segment of the hind tarsi about as long as the second segment. The elytra of the *female* are together about as long as broad.

Type locality : Potchefstroom, Transvaal (S.A.M.).

Other material examined from : Transvaal : Lydenburg (S.A.M. Holotype of *S. egens*) ; Piet Retief Dist. ; unlocalized (Fry coll.). Swaziland : Mbabane (B.S.S.).

Total material seen : 21 examples.

Having had the opportunity to compare the types of the two species described by Péringuey, I have no doubt as to their synonymy.

S. pauperata Pér.

Schizonycha pauperata Péringuey, 1908, p. 701.

Length 13 mm. Breadth 7 mm.

MALE

Derm castaneous to dark, fusco-castaneous. *Head* with labral emargination weakly acute; anterior clypeal face vertically plane, with a moderate median gap in its row of setiferous punctures; anterior edge of clypeus weakly emarginate medially; clypeal carina strongly arcuate; frontoclypeal suture clearly visible; vertex without a transverse carina, briefly rounded; clypeal punctures elongate, their internal borders sharply formed and slightly raised; frontal punctures asperose, closely set; frontal and clypeal punctures bearing short, white, suberect, pointed, narrowly squamiform setae. *Pronotum* with anterior border only slightly sinuate laterally; anterior and posterior angles obtuse; posterior margin with a weakly raised hind border in front of scutellum; lateral borders with stiff, outstanding, curved setae slightly shorter than basal anterior tarsal segment; surface without transverse, subbasal, impunctate areas; disc and margins coarsely and closely punctured; punctures annulate, usually separated by their own diameter or a little less, bearing short, white, suberect, pointedly squamiform setae similar to, or slightly larger than those on head; intervals smooth. Scutellum transverse (5 : 8); annulate-punctate, punctures usually congregated along lateral margins, bearing setae slightly smaller than those of pronotal disc; intervals finely shagreened. *Elytra* with punctures separated by more or less their own diameter, bearing squamiform setae similar to (sometimes slightly smaller than) those of pronotal disc; intervals almost smooth, sometimes with traces of shagreening around punctures; lateral borders with stiff, outstanding setae from bases almost to apices, setae near shoulders about half as long as setae along lateral borders of pronotum, setae becoming progressively shorter toward apical borders. Pygidium transverse; convex; rather sparsely annulate-punctate, punctures separated by from one to several diameters on disc, more closely arranged toward basal angles, bearing small, erect, white or yellowish-white setae finer than those of elytra; intervals finely shagreened. *Metasternum* with fine, yellow, suberect setae in punctures on anterior half and sometimes on mediobasal area as well; setae elsewhere on metasternum shorter, narrowly squamiform, appressed; metepisterna with long, yellow setae on anterior third, with shorter, squamiform setae posteriorly; hind coxae with appressed, narrowly squamiform setae in punctures except near junction with trochanters where setae are non-squamiform. Abdominal segments more closely punctured laterally than medially; punctures on disc bearing a mixture of long and short, non- or scarcely squamiform setae; punctures along lateral margins bearing narrowly squamiform setae similar to those on elytra; intervals finely and faintly shagreened. *Legs* with anterior tibiae tridentate; basal hind tarsal segment about three fourths as long as second; tarsal claws with upper ramus longer than lower and slightly divergent from it, lower ramus obliquely truncate apically.

Genitalia (Text-figs. 250 and 251).

FEMALE. A little more rounded in outline than *male*, but elytra with humeral calli still clearly visible. Wings vestigial. Metasternum distinctly shorter than in *male*. Antennae with lamellae about three fifths as long as those of *male*. Basal hind tarsal segment about as long as second segment. The *female* shows a tendency

for the discs of the pronotum and elytra to be less closely and less regularly punctured than they are in the *male* (cf. *S. compacta*, p. 150), but some examples may be indistinguishable from *males* on these grounds alone.

Type locality : Potchefstroom, Transvaal (S.A.M.).

Other material examined from : Transvaal : Unlocalized (Fry coll.). Cape Province : Aliwal North (F.).

The Aliwal North record rests upon a single *female* example assigned, with some reservations to *S. pauperata* Pér.

Total material seen : 11 examples.

S. rurigena Brske.

Schizonycha rurigena Brenske, 1898, p. 366.

Schizonycha rurigena Brske., Péringuey, 1904, p. 221.

Length 11–12 mm. Breadth 6.5–7 mm.

MALE

This species is very closely related indeed to the foregoing, differing as explained in the key to species and by the genitalia. A further point may be that this species appears likely to be generally lighter in colour than *S. pauperata*.

Genitalia (Text-figs. 252 and 253).

FEMALE. Unknown.

Type locality : Natal (Z.M.B.).

Other material examined from : Natal : A single, unlocalized example from the Zoologisches Museum, Berlin.

REFERENCES

- ANDREAE, H. 1933. Die südafrikanischen Arten der Gattung *Alys* Reiche (Col.). *Stett. ent. Ztg.* **94** : 104–7.
- ARROW, G. J. 1944. The Asiatic Beetles of the Melolonthine genus *Schizonycha*. *Ann. Mag. Nat. Hist.* (11) **9** : 194–200.
- 1944a. Systematic notes on Melolonthine Beetles belonging to *Holotrichia* and related genera. *Ann. Mag. Nat. Hist.* (11) **9** : 631–648.
- BLANCHARD, E. 1845. Histoire des Insectes. **1** : 1–240. Paris.
- 1850. Cat. Coll. Ent. Mus. H.N., Paris, Coleopt. **1** : 1–398, 10 pls.
- BOHEMAN, C. 1857. Insecta Caffraria, 1838–1845, Stockholm, **2** : 1–395, 1 pl.
- BRENSKE, E. 1892. Beitrag zu Kenntniss der Gattungen *Lepidiota* und *Leucopholis* (Col.). *Berl. ent. Z.* **37** : 33–62.
- 1895. Melolonthini e Rutelini. *Ann. Mus. Civ. Genova*, **35** : 218–226.
- 1896. Neue Coleopteren Arten. *Berl. ent. Z.* **41** : 339–364.
- 1898. Melolonthiden aus Afrika. *Stett. ent. Ztg.* **59** : 334–394.
- BURGEON, L. 1946. Melolonthini et Pachydemini du Congo belge. *Rev. Zool. Bot. Afr.* **39** : 230–273.
- BURMEISTER, H. 1855. Handbuch der Entomologie. **4** (2) : 1–557. Berlin.
- CASTELNAU, F. L. DE L. DE. 1840. Histoire naturelle des Insectes. **2** : 1–563, 38 pls. Paris.
- COQUEREL, CH. 1851. Coléoptères Nouveaux de Madagascar. *Rev. Zool.* (2) **3** : 86–90.

- DEJEAN, P. F. M. A. 1833-1835. Catalogue de la collection des Coléoptères de M. le Comte Dejean ed. 2, pp. 1-443. Paris.
- 1837. Catalogue de la collection des Coléoptères de M. le Comte Dejean ed. 3, pp. 1-503. Paris.
- FABRICIUS, J. C. 1781. *Species Insectorum*, 1: 1-552. Hamburg and Kiel.
- 1787. *Mantissa Insectorum*, 1: 1-348. Copenhagen.
- 1792. *Entomologica Systematica*, 1: 1-548. Copenhagen.
- 1801. *Systema Eleutheratorum*, 1: 1-506. Kiel.
- GERSTÄCKER, G. A. 1873. von der Decken's Reise in Ost Africa in 1859-1861. Bd. 3 Abth. 2, pp. 1-542, 18 pls. col.
- GRIDELLI, E. 1939. *Miss. biol. Paese Borana*, 2: 470-521, figs. 23-38.
- HERBST, J. F. W. 1786. In Fuessly. *Archiv für Insectengeschichte*, 7-8: 153-196, pls. 54. Zurich & Winterthur.
- 1790. *Natursystem der Insekten, Käfer*, 3: 1-325. Berlin.
- KLUG, J. C. F. 1855. *Monatsb. Akad. Berlin*, pp. 643-660.
- 1862. Peter's Reise nach Mossambique, *Zool.* 5: 145-267, pls. 8-15. Berlin.
- KOLBE, H. J. 1894. Beitrag zur Kenntniss der Melolonthiden. *Ann. Soc. ent. Belg.* 38: 548-577.
- LACORDAIRE, TH. 1856. *Hist. nat. Ins. Col.*, 3: 1-582. Paris.
- MOSER, J. 1914. Neue Schizonychinen aus Afrika. *Dtsch. ent. Z.*, pp. 235-278.
- 1917. Neue Afrikanische Melolonthiden. *Dtsch. ent. Z.*, pp. 183-256.
- 1917a. Beitrag zur Kenntniss der Melolonthiden VI, *Stett. ent. Ztg.* 78: 54-97.
- 1918. Neue Melolonthiden aus der Sammlung des Deutschen Entomologischen Museums zu Berlin-Dahlem. *Stett. ent. Ztg.* 79: 209-247.
- 1920. Beitrag zur Kenntniss der Melolonthiden XI. *Stett. ent. Ztg.* 81: 3-28.
- 1921. Beitrag zur Kenntniss der Melolonthiden XII. *Stett. ent. Ztg.* 82: 48-73.
- OLIVIER, G. A. 1789. *Entomologie ou Histoire Naturelle des Insectes, Coléoptères*, 1, No. 5, pp. 1-84, 10 pls.
- PÉRINGUEY, L. 1892. Third contribution to the coleopterous fauna of South Africa. *Trans. S. Afr. phil. Soc.* 6: 1-94.
- 1904. A Descriptive Catalogue of the Coleoptera of South Africa (Lucanidae & Scarabaeidae). *Trans. S. Afr. phil. Soc.* 13: 1-293, pls. i-iv.
- 1908. A Descriptive Catalogue of the Coleoptera of South Africa (Lucanidae, Passalidae, Scarabaeidae). Additions and corrections. *Trans. S. Afr. phil. Soc.* 13: 547-752, pl. xlviii.
- PEYERIMHOFF, P. DE. 1935. Coléoptères nouveaux ou mal connus de Berbérie. 11—Le genre *Schizonycha* Er. (Scarabaeidae). *Bull. Soc. ent. Fr.* 40: 147-150, 1 fig.
- QUEDENFELT, G. 1884. Verzeichniss der von Major a. D. von Mechow in Angola und am Quango-Strom, 1878-1881, gesammelten Pectinicornen und Lamellicornen. *Berl. ent. Z.* 28: 265-340, tab. 8, 9.
- REICHE, L. 1847-1850. Voyage en Abyssinie, dans les Provinces du Tigré, du Samen et de l'Amhara—par MM. Ferret et Galinier (1839-1843), 3: 1-356. Paris.
- SCHÖNHERR, C. J. 1817. *Synonymia Insectorum*, Bd. 1 Th. 3: 1-506, pls. 5 and 6. Skara.
- STRAND, E. 1942. *Miscellanea nomenclatoria zoologica et palaeontologica X. Folia zool. hyrobiol.*, 11: 386-402. Riga.
- WALLENGREN, H. D. J. 1881. Coleoptera Transvaaliensia. *Ent. Tidskr.*, 1: 9-22.

INDEX

Page numbes in heavy type indicate the principle reference to a species or genus ; numbers in italics refer to the key to species.

- abenaba* sp. n., 76, 89, **155**.
abrupta sp. n., 76, 93, **181**, 182.
abscondita sp. n., 76, 93, **186**, 187.
affinis Boh., 73, 76, 96, 137, 193, **206**, 207.
affinis Pér. (*nec* Boh.), **103**.
africana Cast., 155.
africana Klug (*nec* Cast.), **155**, 208.
algoa Pér., **115**.
algoensis Pér., 76, 84 **115**.
ambigua Pér., 76, 82, **101**.
Amphimallon Cast., 66.
Apogonia Kirby, 72.
Atys de Montfort, 71.
Atys Reiche, 66, 67, 68, **69-72**, 212.
Atysilla Strand, 71.

barda Burm., 76, 87, 134, **135**, 137.
bogamoyana Brske., **156**, 158.
bohemani n. n., 76, 83, **103**.
boschimana Pér., 76, 93, 144, **189**, 190.
Brahmina Blanch., 68.

caffra Pér., **120**, 122.
capensis Burm., 76, 93, **187**, 189.
carbonaria Boh., 76, 94, 195, **196**, 197.
ciliata Burm., 77, 83, 92, 128, **146**, 148, 186.
ciliata Pér. (*nec* Burm.), **185**.
citima Pér., 77, 90, 94, **169**, 170.
clypealis sp. n., 77, 87, **144**.
comosa Burm., **74**, 77, 149.
comosa Pér. (*nec* Burm.), 74, **148**.
compacta sp. n., 77, 88, **150**, 152, 215.
confinis Pér., 71, 77, 84, **113**.
consobrina Klug, **75**, 77.
constrata Pér., 77, 91, **179**.
consueta Pér. (*nec* Kolbe), **160**, 161.
continens Pér., 77, 89, **158**, 159, 197, 198.
corrosa Burm., 70, 74, 77, 95, 149, **203**, 204, 205, 212.
crinita Brske., 72, 77, 85, **127**.
curtula (Pér.) (*Apogonia*), 72.
cylindrica (Gyll.), 68.

damarina Pér., 77, 87, **145**.
debilis Burm., 72, 74, 77, 85, **120**.
debilis Pér. (*nec* Burm.), **119**.
deceptor sp. n., 77, 92, **182**.

dilucida Brske., 77, 95, **201**.
diluta Qued., 69, 70.
Diplotaxis Kirby, 66.
disputabilis Pér., 77, 83, **105**.
dissensa Pér., 72, 77, 86, 95, **128**.
dissimilis Pér., 77, 95, **197**, 198.
divulsa Pér., 72, 77, 83, **106**.
durbana Pér., 77, 82, **97**.

effeta Pér., 77, 87, **136**, 137.
egens Pér., **212**.
elegans Pér., 77, 85, **124**, 125, 126.
Entyposis Kolbe, 72.
Etischiza Brske., 68, 69.
Euryschiza Brske., 72.
exacerbens Pér., **201**.
exasperans Pér., **190**, 191.

fallax (Pér.), 70, 77, 85, **117**.
fartula Pér., 77, 79, 85, 93, **126**, 127, 131, 132.
fatidica Pér., 77, 85, **124**, 125.
feirana Pér., 77, 82, **99**, 100.
filiola Moser, 74, 77, 95, **200**.
fimbriata Brske., 77, 96, 155, 187, **207**, 208.
fraudigera Pér., 77, 96, **212**.
fraudulenta Pér., **187**, 189.
frontalis Moser, 71, 77, 84, **111**.
furva Pér., 137, **206**.

geilenkeuseri Brske. 77, 93, 144, **190**, 191.
Genyoschiza Moser, 71.
Geotrupes Latr., 68.
glabra Kolbe, 70.
globa sp. n., 77, 94, **183**, 195.
globator (F.), 68, 87, 89, **141**, 143, 197.
Glyptoglossa Brske., 67, 72.
gonaquia Pér., 74, 87, **139**, 140.
gonaquoides sp. n., 77, 87, **140**.
gracilis Brske., 77, 84, 92, **110**.

henningii (Fischer) (Lachnota), 68.
heudelotii (Blanch.) (Etischiza), 71.
Homoeoschiza Kolbe, 72.
howickiana Pér., **209**, 210.

- humilis* (Pér.), 203, 204, 205.
hybrida Pér., 77, 86, 132.
hypocrita (Pér.), 70, 170, 171.

idonea Pér., 142, 143.
ignava Pér., 77, 83, 102.
immixta Pér., 211, 212.
imparilis Moser, 110.
incerta (Burm.) (Etischiza), 71.
increta Pér., 77, 84, 109.
indotata Pér., 85, 122.
inedita Pér., 77, 82, 90, 98.
infarsa Pér., 77, 85, 116.
inops Pér., 72, 77, 84, 94, 108.
infans (Pér.), 77, 95, 200, 202, 203.
infantilis Pér., 77, 83, 101, 104.
inostralis sp. n., 78, 92, 180.
inscita (Pér.), 78, 94, 192, 207.
insuesa Pér., 78, 86, 134.
inverta (Pér.), 78, 92, 183.

jordani sp. n., 78, 87, 143.

kochi sp. n., 78, 90, 163.

Lachnota Reitter, 68.
languens Pér., 78, 82, 83, 101, 207.
Lasiopsis Blanch. (nec. Er.), 68.
laticia n. n., 78, 88, 148, 149.
lebidis n. n., 78, 85, 119.
lilliputana Brske., 195.
litigiosa Pér., 189, 190.
livada n. n., 78, 90, 94, 168, 170.
livida Klug, 75, 76, 78, 89, 139, 153, 154, 156.
lurida (Burm.) (Glyptoglossa), 72.

manicana Pér., 78, 79, 91, 178, 179.
marginata sp. n., 78, 87, 138.
matabelana Pér., 78, 90, 95, 107, 163.
mediastina Pér., 78, 86, 133.
meracula Pér., 78, 94, 191.
microps Brske., 110.
mimocontinens sp. n., 78, 90, 159, 163.
minima Pér., 78, 95, 185, 205.
minor sp. n., 78, 92, 184, 185.

natalensis Brske., 78, 96, 195, 210, 211.
natalica Moser, 206.
neglecta Boh., 78, 89, 160, 161, 166.

neglecta Pér. (nec Boh.), 164, 166.
neutra Pér., 120, 122.
nigricornis Burm., 78, 84, 114.
noscitata Pér., 78, 85, 125.

oblonga Boh., 73, 78.
oblonga Pér. (nec Boh.), 73.
ova Coquerel, 67.
ovampoana Pér., 78, 90, 166.
ovatula Brske., 74, 78, 96, 211, 212.

parilis Pér., 78, 83, 105.
pauperata Pér., 78, 96, 213, 215.
paupercula Pér., 110.
perforata Burm., 78, 92, 148, 185, 186.
peringueyi Dalla Torre, 78, 84, 114.
perplexabilis Pér., 78, 95, 96, 199.
piceonigra sp. n., 78, 88, 151, 152.
plausibilis Pér., 160.
profuga Pér., 78, 79, 90, 92, 125, 167.
pseudosquamifera sp. n., 78, 88, 152.
puerilis Pér., 78, 83, 86, 101, 134.
puncticollis Boh., 78, 90, 161, 164, 165, 166.

quaesita Pér., 78, 88, 149.

Rhizotrogus Latr., 74.
rhodesiana Moser, 78, 91, 177, 178.
rotunda sp. n., 78, 87, 88, 140.
ruficollis (F.), 68.
rufina Boh., 78, 91, 175, 176.
rugosa Brske., 78, 85, 122, 124, 125.
rurigena Brske., 78, 96, 215.
russula Boh., 78, 96, 209, 210, 211.

saga Pér., 78, 95, 185, 198.
saginata Pér., 79, 82, 96.
salaama Brske., 75, 79, 89, 155, 156, 208.
salisburiana Pér., 79, 90, 170, 171.
samenensis (Reiche), 69, 70.
scabiosa Pér., 79, 89, 92, 93, 161.
simplex (Pér.) (Entyposis), 72.
Spathoschiza Arrow, 72.
spectabilis Pér., 79, 91, 171.
spuria Pér., 79, 88, 152.
squamifera Wallengren, 79, 94, 153, 195, 197.
squamosetosa Moser, 79, 83, 107, 108.
straminea (Pér.), 79, 91, 176, 184.
Syngeneschiza Brske., 72.

transvaalica Pér., 79, 82, **100**, 137.

Trichoschiza Moser, 72, 128.

tumida auctt. (*nec.* Cast.), 74, **126**, 127.

tumida (Cast.), **74**, 79.

unicolor (Herbst), 76, 79, 86, **129**, 132.

urundiensis Burgeon, 70.

usambarae Brske., 79, 89, **156**, 158, 175.

vaalensis Pér., 155, **207**, 209.

valida Boh., 79, 91, 169, **172**, 174.

valida Pér. (*nec.* Boh.), **168**, 176.

valvata Brske., 79, 85, **123**, 124.

vicaria Pér. (*nec.* Kolbe), **114**.

villosa Brske., 79, 85, **118**.

vryburgensis sp. n., 79, 91, **174**, 175.

windhoekensis sp. n., 79, 87, **137**, 131, 139.

zambeziana Pér. **153**, 154.